



# the FALL 2024 catalog



**ROCHESTER**  
COMMUNITY AND TECHNICAL COLLEGE

*A member of Minnesota State*

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# ROCHESTER COMMUNITY AND TECHNICAL COLLEGE (RCTC)

## *CAMPUS HIGHLIGHTS*

- Founded in 1915 by Dr. Charles Mayo, RCTC is in Rochester, Minnesota, home to Mayo Clinic
- Minnesota's oldest, public, two-year college; one of the oldest in the nation
- Rochester has a diverse population of over 121,000 people.
- Numerous publications have named Rochester as one of the nation's best places to live.
- Rochester is also one of the most educated cities in the world.
- RCTC maintains partnerships with local and regional employers and community organizations.
- The campus covers more than 500 acres with 20 buildings and a nationally recognized Regional Sports Center.
- In 2024 - 2025, the RCTC Foundation will offer 300 + scholarships worth over \$500,000.

## *PROGRAM HIGHLIGHTS:*

- Liberal Arts and Sciences
- Allied Health and Nursing
- Career and Technical Education
- Mayo Clinic affiliated Programs

## *ACADEMIC PROGRAM DEGREES AND AWARDS – 94 OFFERINGS IN 2 YEARS OR LESS*

21 Associate of Applied Science	25 Associate of Science
6 Associate of Arts	12 Diploma
2 Associate of Fine Arts	28 Certificate

## *STUDENT STATISTICS (2022-2023 STUDENTS)*

- 6093 Students served in credit-based classes
- 63% Female | 36% Male | 1% Unknown
- 51% First Generation Students
- 32% Students of Color

## *GRADUATE PLACEMENT STATISTICS (2021-2022 GRADUATES)*

- 91.3% of RCTC graduates are employed in a field related to their college training or are continuing their education

## MESSAGE FROM PRESIDENT BOYD



Welcome to Rochester Community and Technical College. Community colleges changed my life forever and I hope we can change yours too. RCTC is here to help you get on your career path and stay on your path. Whether you are seeking an associate degree, taking classes with plans to transfer, or taking classes to earn certificates or workforce skills, we are here for you. In fact, our new mission statement says RCTC empowers students to thrive in an ever-changing, diverse society by providing access to exceptional education.

RCTC is known for our exceptional faculty and staff, all committed to providing world-class learning opportunities in a supportive, student-centered environment. Many of RCTC's programs are nationally accredited, which assures employers and transfer institutions that our programs meet the high standard for quality set by accrediting bodies. The College also actively collaborates with employers and four-year university partners to ensure that students have excellent employment and transfer options once they've completed their studies at RCTC. Our support services include counseling, pathway advising, financial aid, health services, disability services, technology support, tutoring and so much more.

In addition, RCTC complements our academic offerings and support services with an abundance of student life activities, club opportunities, and a rich history in athletics, currently offering eight varsity sports. It's often through those organizations and teams that lasting relationships are formed with a diverse group of individuals with similar interests.

If you've been thinking about pursuing a degree or just taking a class, come check us out at [www.rctc.edu](http://www.rctc.edu). Our staff are available to help you explore what RCTC has to offer.

Jeffery S. Boyd, Ed.D.  
President

## GENERAL INFORMATION

The provisions of this publication were prepared on the basis of the best information as of the date of publication; however, information in this publication may be amended at any time by appropriate action of the faculty, the college administration, the Minnesota State Board of Trustees, or the Minnesota Legislature.

When such changes occur, every reasonable effort will be made to notify the student body, however, Rochester Community and Technical College reserves the right to change any information, including statement of fees, course offerings and admission and graduation requirements, without notice or obligation. This publication is not a legal document and does not constitute a contract between the College and the user.

The information in this catalog is for use as an academic planning tool and is subject to change at any time. Please consult appropriate departments and offices for final policies, procedures and deadlines. Visit RCTC's website at <https://www.rctc.edu> for up-to-date information.

Note: RCTC assigned student email shall be the primary means of communicating with students, but the College also retains the right to send official correspondence via traditional methods as well.

### **Alternative Format**

Information contained in this catalog can be made available in alternative formats by calling the RCTC Disability Support Services at 507.280.2968.

## RCTC'S MISSION, VISION, VALUES AND OUTCOMES

### **Mission**

Rochester Community and Technical College empowers students to thrive in an ever-changing, diverse society by providing access to exceptional education.

### **Vision**

Rochester Community and Technical College will be a universal gateway to world-class learning opportunities.

### **Value Proposition**

Improving Student Lives

### **College Values and Service Attributes**

- **Learner-Centered:** Be approachable and attentive to students' and others' needs
- **Excellence:** Anticipate, create, and recognize engaging experiences
- **Respect:** Demonstrate understanding and sensitivity when serving

- **Teamwork:** Collaborate and engage each other to better serve
- **Innovation:** Explore, empower, and implement creative ideas to better serve
- **Fun:** Foster a pleasant, personable, and enjoyable environment

### Core Student Learning Outcomes

- **Communication:** Students will communicate appropriately for their respective audiences.
- **Critical Thinking:** Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.
- **Personal and Professional Accountability:** Students will take responsibility as active learners for achieving their educational and personal goals.
- **Global Awareness/Diversity:** Students will demonstrate an understanding of and respect for human diversity through their words and actions.

## ACCREDITATIONS

RCTC is fully accredited by the Higher Learning Commission. RCTC also holds occupationally specific accreditation in many academic programs.

### What Accreditation Means to You

When you attend an accredited college or university, you can expect:

- **A Quality Education:** Accreditation means that the institution meets standards of quality for faculty, curriculum, administration, library, financial management and student services.
- **Financial Aid Opportunities:** You can only obtain federal financial assistance if the institution has appropriate accreditation from an organization recognized by the United States Department of Education.
- **Credits that Transfer:** If you ever want to transfer your college credits to continue your education, accreditation is an important factor when a college or university is deciding whether to accept transfer credits from your previous school.

## INSTITUTIONAL AND PROGRAM ACCREDITATIONS

### Institutional Accreditation

#### The Higher Learning Commission

230 South LaSalle Street, Suite 7-500

Chicago, IL 60604-1411

800.621.7440

**Automotive Technician Program****Automotive Service Excellence (ASE) Education Foundation**

1503 Edwards Ferry Road NE, Suite 401

Leesburg, VA 20176

703.669.6650

**Cancer Registry Program****National Cancer Registrars Association (NCRA)**

1330 Braddock Place, Suite 520

Alexandria, VA 22314

703-299-6640

**Cardiovascular Invasive Specialist, Clinical Neurophysiology Technology, Emergency Medicine Paramedic, and Surgical Technology Programs****Commission on Accreditation of Allied Health Education Programs (CAAHEP)**

9355 113<sup>th</sup> Street N, #7709

Seminole, FL 33775-7709

727.210.2350

**Cardiovascular Invasive Specialist Program****Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT)**

1449 Hill Street

Whitinsville, MA 01588

978.456.5594

**Coding Specialist, Healthcare Informatics, and Health Information Technology Programs****Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)**

200 East Randolph St, Suite 5100

Chicago, IL 60601

312.235.3255

**Dental Assistant and Dental Hygiene Programs****Commission on Dental Accreditation of the American Dental Association (CODA)**

211 East Chicago Avenue Chicago, IL 60611-2678

800.621.8099 or 312.440.4653

**Emergency Medicine Paramedic Program****Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (COAEMSP)**

8301 Lakeview Parkway, Suite 111-312

Rowlett, TX 75088

214.703.8445

**Histology Technician****National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)**

5600 N. River Road, Suite 720

Rosemont, IL 60018-5119

773.714.8880

**Magnetic Resonance Imaging (MRI) and Radiography Programs****Joint Review Committee on Education in Radiologic Technology (JRCERT)**

20 N Wacker Drive, Suite 2850

Chicago, IL 60606-3182

Phone: 312-704-5300

**Nursing Programs****Accreditation Commission for Education in Nursing, Inc. (ACEN)**

3390 Peachtree Road NE, Suite 400

Atlanta, GA 30326

404.975.5000

**Peace Officer Program**

Minnesota Board of Peace Officer Standards and Training

1600 University Avenue, Suite 200

St. Paul, MN 55104-3825

651.643.3060

**Surgical Technology Program****Accredited Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA)**

19751 E. Main Street, Suite 339

Parker, CO 80138

303.694.9262

**Veterinary Technician Program****American Veterinary Medical Association (AVMA)**

1931 North Meacham Road, Suite 100

Schaumburg, IL 60173-4360

800.248.2862

## POLICIES

It is the responsibility of every student, employee and guest to the campus to be familiar with College policies and procedures.

For more information about all aspects of RCTC and Minnesota State Colleges and



Universities (Minnesota State) system policies, please visit the RCTC policies website at <http://www.rctc.edu/policies>. This site is intended to assist you in locating policies and procedures that govern the Rochester Community and Technical College community and includes tools to assist you in creating new or updating existing policies.

If you have questions, please e-mail them to [PresidentsOffice@rctc.edu](mailto:PresidentsOffice@rctc.edu). Policies will be made available, upon request, in an alternative format such as large print or audio tape.

**NOTICE:** Every effort has been made to make the RCTC Web Site accurate as of the date of publication; however, all policies, procedures, and fees are subject to change at any time by appropriate action of the faculty, the college administration, the Minnesota State Board of Trustees, or the Minnesota Legislature.

## **Non-Discrimination and Sexual Violence**

### **EQUAL OPPORTUNITY/NONDISCRIMINATION IN EMPLOYMENT/EDUCATION ([Minnesota State Colleges and Universities Policy 1B.1](#))**

Rochester Community and Technical College prohibits discrimination and harassment against persons in the terms and conditions of employment, personnel practices, or access to and participation in educational programs, services, and activities on the basis of membership or perceived membership in any of the following protected classes: race, sex (including pregnancy, child birth, and related medical conditions), color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, gender expression, veteran status, familial status, and membership or activity in a local human rights commission.

This policy is directed at conduct which constitutes discrimination under state and federal law and is not directed at the content of speech. In cases in which verbal statements and other forms of expression are involved, Rochester Community and Technical College will give due consideration to an individual's constitutionally protected right to free speech and academic freedom. When these issues arise, it is recommended that you consult personnel and/or legal counsel.

For more detailed definitions, policies and procedures follow the links below.

[Minnesota State Policy 1B.1](#) Equal Opportunity and Nondiscrimination in Employment and Education

[Minnesota State Procedure 1B.1.1](#) Report/Complaint of Discrimination/Harassment Investigation and Resolution

Any individual who believes they have been, or are being, subjected to conduct prohibited by Board Policy 1B.1 Equal Opportunity and Nondiscrimination in Employment and Education is encouraged to report the incident to the Vice President of Human Resources

and Equity, Human Resources Office, EA201, Rochester Community and Technical College, Rochester, MN 55904 or call 507-285-7514 or email [humanresources@rctc.edu](mailto:humanresources@rctc.edu).

### **SEXUAL VIOLENCE ([Minnesota State Colleges and Universities Policy 1B.3](#))**

Sexual violence and other forms of sexual misconduct is an intolerable intrusion into the most personal and private rights of an individual and is prohibited at Minnesota State. The Minnesota State system and Rochester Community and Technical College (RCTC) are committed to eliminating sexual violence in all forms and will take appropriate remedial action against any individual found responsible for acts in violation of this policy. Acts of sexual violence may also constitute violations of criminal or civil law, or other Board Policies that may require separate proceedings. To further its commitment against sexual violence, Minnesota State colleges and universities and RCTC provides reporting options, an investigative and disciplinary process, and prevention training or other related services as appropriate.

Detailed definitions, policies and procedures may be found online:

[Minnesota State Board Policy 1B.3](#) Sexual Violence Policy

[Minnesota State Procedure 1B.3.1](#) Response to Sexual Violence and Title IX Sexual Harassment

For more information on campus and community resources, support, and reporting options related to Sexual Violence – Title IX please visit: <https://www.rctc.edu/services/student-affairs/title-ix/>.

Any individual who believes they have been, or are being, subjected to conduct prohibited by Minnesota State Board Policy 1B.3, Sexual Violence, is encouraged to report the incident to Dr. Teresa Brown, Title IX Coordinator, Student Affairs, SS208, Rochester Community and Technical College, Rochester, MN, at 285-7195 or email at [TitleIX@rctc.edu](mailto:TitleIX@rctc.edu).

## **WELCOME AND ONE STOP CENTER**

RCTC's Welcome and One Stop Center provides multiple student services, including admission to RCTC, financial aid information, orientation, placement/assessment testing, campus visits, and general information. Prospective, new, and returning students can visit the Welcome and One Stop Center to complete most enrollment-related activities. Please visit the following websites for more information:

- Prospective Student Information: [www.rctc.edu/admissions](http://www.rctc.edu/admissions)
- Application for Admission: [www.rctc.edu/apply](http://www.rctc.edu/apply)
- Student eServices: [www.rctc.edu/eservices](http://www.rctc.edu/eservices)
- Free Application for Federal Student Aid (FAFSA): [www.studentaid.gov](http://www.studentaid.gov)

## **DISABILITY SUPPORT SERVICES**

RCTC Disability Support Services offers academic accommodations to students with disabilities. Accommodations may include testing accommodations, sign language interpreting, early registration, the use of adaptive equipment, priority seating, and alternative versions of textbooks. Other services may include on and off campus referrals. Additional information is available on the [Disability Support Services webpage](#).

## FINANCIAL AID

The RCTC Financial Aid team educates students and families about the options available for funding college and assists them in navigating this sometimes, complicated process. We assist students in securing funding to help pay for college costs: from application to disbursement and through to repayment of loans. RCTC offers a wide variety of financial aid programs, which include Federal and State grants, work study employment and multiple student loan options.

All students seeking financial aid must complete the U.S. Department of Education's Free Application for Federal Student Aid (FAFSA) at [www.studentaid.gov](http://www.studentaid.gov). For more information about all aspects of Financial Aid and the funding options available to RCTC students, please visit the RCTC Financial Aid website at <http://www.rctc.edu/financialaid> or visit with a Financial Aid Specialist in the Welcome and One Stop Center on main campus.

## RECORDS AND REGISTRATION

RCTC's Records and Registration Office provides multiple student services including information regarding transcript evaluation, Degree Audit Reports (DARS), registration, grading, and graduation services. The Records and Registration Office maintains a permanent and confidential record of each student's academic history at the college.

Please visit the following websites for more information:

Student eServices: [www.rctc.edu/eservices](http://www.rctc.edu/eservices)

Graduation Information and Application: <https://www.rctc.edu/graduation>

## ACADEMIC CALENDAR

Academic Calendars in the Minnesota State system are subject to change and modifications or interruptions due to occurrences such as fires, natural disasters, labor disputes, interruption of utility services, acts of nature, civil disorders, wars and pandemics. In the event of any such occurrences, the College will attempt to accommodate its students. It will not, however, guarantee that courses of instruction, extracurricular activities, or other RCTC programs or events will be completed or rescheduled.

For a full listing of the RCTC academic calendar including important dates such as registration dates, drop/adds, holidays and non-instruction days, please go to:

RCTC's Academic Calendar: [www.rctc.edu/academics/academic-calendar](http://www.rctc.edu/academics/academic-calendar)

Registration dates: [www.rctc.edu/eservices/registration/registration-dates-windows](http://www.rctc.edu/eservices/registration/registration-dates-windows)

Drop/Add information: [www.rctc.edu/eservices/registration-course-drop](http://www.rctc.edu/eservices/registration-course-drop)

Important Deadlines: [www.rctc.edu/eservices/registration/registration-deadlines](http://www.rctc.edu/eservices/registration/registration-deadlines)

<b>2024-2025 Academic Calendar</b> (Dates subject to change)		
Academic Calendar ( <a href="#">PDF version</a> )		
<b>Fall Semester – 2024</b>		
<a href="#">Registration Dates / Windows</a>		
Student Welcome Day	Thursday	August 22, 2024
Classes Begin	Monday	August 26, 2024
Last Day to Drop (Full-Term Courses) ( <a href="#">See Drop/Add Policy for details on non-concurrent and short-term courses.</a> )	Friday	August 30, 2024
Labor Day Holiday – No Classes	Monday	September 2, 2024
Student Success Day – No Classes	Wednesday	September 18, 2024
Faculty Development Day – No Classes	Tuesday	October 8, 2024
Education Minnesota Conference – No Classes	Thurs-Fri	October 17 - 18, 2024
Veterans Day Holiday Observed – No Classes	Monday	November 11, 2024
Thanksgiving Break	Thurs.-Friday	November 28-29, 2024
Fall Semester Ends	Friday	December 20, 2024
<b>Spring Semester – 2025</b>		
<a href="#">Registration Dates / Windows</a>		
Classes begin	Monday	January 13, 2025
Last Day to Drop (Full-Term Courses) ( <a href="#">See Drop/Add Policy for details on non-concurrent and short-term courses.</a> )	Friday	January 17, 2025
Martin Luther King, Jr Day Holiday- No Classes	Monday	January 20, 2025
All Employee Development Day – No Classes	Tuesday	February 4, 2025
Presidents’ Day Holiday – No Classes	Monday	February 17, 2025
Spring Break – No Classes	Monday-Friday	March 10-14, 2025
Faculty Development Day – No Classes	Thursday	April 17, 2025
Faculty Development Day/Spring Semester Ends – No Classes	Wednesday	May 14, 2025
Commencement – <i>Time To Be Determined</i>	Wednesday	May 14, 2025
<b>Summer Session – 2025</b>		
<a href="#">Registration Dates / Windows</a>		
Summer Session Begin	Monday	June 2, 2025
Last Day to Drop (Full-Session Courses) ( <a href="#">See Drop/Add Policy for details on non-concurrent and short-term courses.</a> )		
Juneteenth Holiday Observed – No Classes	Thursday	June 19, 2025
Independence Day Holiday Observed – No Classes	Friday	July 4, 2025
Summer Session Ends	Thursday	August 7, 2025

## ACADEMIC ADVISING AND COUNSELING

Every student is assigned an academic advisor or counselor according to their academic program and pathway. The role of the advisor or counselor is to support the students in their educational growth and guide them through the program requirements. The assigned advisor or counselor's name appears on student schedules and on Degree Audit Reports ([DARS](#)). Students should work closely with their academic advisor or counselor so that educational goals are met.

As a student, it is very important to meet with your academic advisor or counselor each semester to ensure that you receive ongoing advice regarding satisfactory academic and career progress.

Advising and Counseling can assist students with personal and career counseling. In addition, there are advisors for specific student groups including Veterans, International Students, Multicultural Students, and Student Athletes.

For more information about all aspects of Advising and Counseling available to RCTC students, please visit the Academic Advising and Counseling site: <https://www.rctc.edu/services/advising>.

## ARTICULATION AGREEMENTS

### **Definition of an Articulation Agreement**

An articulation agreement is a formal document produced when two or more academic institutions follow a process leading to a partnership to provide a formalized pathway for student transfer.

### **Purpose of Articulation Agreements**

Articulation agreements are designed to build strong partnerships and coordination between schools to aid in a smooth transition for students. By identifying comparable coursework, degree requirements can be met at one institution and transferred to another institution.

### **Benefits of Articulation agreements**

Articulation agreements ensure that students understand exactly which courses will and will not transfer. With such an agreement, students are more likely to make better course choices and can save students both time to degree and money. Four-year universities are noticing that transfer students have a high graduation rate, and well-crafted articulation agreements often contribute to a student's success at the university.

- Articulation agreements generally are formed through partnerships between two-year community and technical colleges and four-year universities. During articulation, representatives from each institution conduct meetings among faculty and staff before finalizing an agreement. The representatives consider similarities in course work, curricula,

syllabi, textbooks and competency/outcomes profiles to ensure seamless transfer of credits to the partner institution.

- As the legal document of a partnership, the articulation agreement contains the final accords as agreed upon between the two institutions. This may include a description of the relationship between degree programs at the partner institutions illustrating their cohesiveness, operation guidelines and expectations, and, in the event the partnership is no longer viable, a foundation for dissolving or amending the terms of the agreement.
- The articulation agreement also details any benefits accorded from one institution to the other. For example, a university might offer community college students, faculty and staff a discount per credit hour, excluding fees, in addition to marketing assistance between the institutions, sponsorships and joint extracurricular and academic programs.

In addition to the Minnesota Transfer Curriculum (MnTC) accepted across the other 36 colleges and universities within the MinnState system, Rochester Community and Technical College has program articulation agreements with the following institutions:

Bemidji State University	Saint Mary's University of Minnesota
Minnesota State University - Mankato	University of North Dakota
Minnesota State University - Moorhead	Winona State University
Northwestern Health Sciences University	

For a list of all RCTC Articulation Agreements visit: <http://www.mntransfer.org>. For more information on formal articulations, please contact an RCTC Advisor.

## TRANSFER INFORMATION

Students who present credits from other higher education institutions will have those credits evaluated once official transcripts have been received in the Records and Registration Office. The institution that the student attended must be accredited at the higher education level. The course work to be transferred must be comparable in nature, content and level to courses offered at Rochester Community and Technical College. For more information regarding transfer, please visit the RCTC Transfer website at: <https://www.rctc.edu/admissions/applicant-categories/admission-transfer>.

## TRANSFER PATHWAYS

Minnesota State Transfer Pathways are designed so a student can complete a specific associate degree at a Minnesota State college and transfer to a Minnesota State university to earn a bachelor's degree without losing credits or taking extra courses. Transfer Pathways can be a great resource for saving time and money as you work toward graduation.

If a student completes a Transfer Pathway degree program at a Minnesota State college and are

admitted to any of the seven Minnesota State universities, the student will be guaranteed junior status and given assurance that all 60 college credits will count toward the related bachelor's degree.

RCTC currently supports the following transfer pathways:

<b>Programs</b>	<b>Awards</b>	<b>Credits</b>
Accounting Transfer Pathway	AS	60
Art Transfer Pathway	AFA	60
Biology Transfer Pathway	AS	60
Business Transfer Pathway	AS	60
Chemistry Transfer Pathway	AS	60
Communication Studies Transfer Pathway	AA	60
Computer Science Transfer Pathway	AS	60
Criminal Justice Transfer Pathway	AS	60
Early Childhood Education Transfer Pathway	AS	60
History Transfer Pathway	AA	60
Mass Communication Transfer Pathway	AA	60
Mathematics Transfer Pathway	AA	60
Peace Officer/Public Safety Transfer Pathway	AS	68
Pre-Social Work Transfer Pathway	AS	60
Psychology Transfer Pathway	AA	60
Sociology Transfer Pathway	AA	60

## MINNESOTA TRANSFER CURRICULUM (MnTC)

The Minnesota Transfer Curriculum (MnTC) is a series of courses (40 credits) that comprise a package of general education requirements that, as a package, will satisfy the general education requirements for the first two years of college at all Minnesota public colleges and universities. Transfer of credits from one institution to another has in the past often been a difficult one, with the receiving institution in full control of what is and what is not accepted from the original institution. The Minnesota Transfer Curriculum is a transfer agreement that eliminates transfer difficulties for RCTC students: the successfully completed MnTC will automatically transfer in its entirety.

Note that the Minnesota Transfer Curriculum includes 40 general education credits; in itself the MnTC is not a degree. The AAS, AS, AFA, and AA degrees require a total of 60 (or more) credits. All college level courses in which a student has received a grade of A, B, C, D or P/S will be

considered for transfer into RCTC. Grades of A through D transfer for the Minnesota Transfer Curriculum (MnTC). Completion of the 40 credit MnTC requires a cumulative 2.0 GPA. While D grades transfer, some specialized/occupational/technical programs require courses to have a grade of C or higher to fulfill requirements. No F grade courses will be accepted. Transfer course grades will not be used in computing a student's GPA at RCTC except for some special programs that require the calculation of GPA for application/admission to the program, such as Nursing. Only earned transfer credits (not grade point credits or grade points) will be recorded on the official RCTC transcript.

Keep in mind also that many courses not in the MnTC may still transfer. Students will need to have these courses evaluated by their next institution at the time of application to that institution. For such courses, the receiving institution determines what is and what is not accepted from RCTC in transfer.

The MnTC commits public colleges and universities in Minnesota to a broad foundation that integrates a body of knowledge and skills with study of contemporary concerns that are essential in meeting the challenges of the twenty-first century. The Minnesota Transfer Curriculum emphasizes our common membership in the human community, personal responsibility for intellectual lifelong learning, and an awareness that we live in a diverse world. The curriculum encourages diverse ways of knowing—that is, factual content, theories and methods, and creative models in a broad spectrum of integration, application, and communication.

The ten areas of emphasis or goals in the MnTC are listed below, along with a two-number “code” for each:

- Goal 1: Written and Oral Communication (01)
- Goal 2: Critical Thinking goal is met when student has completed the 40 credits of the Minnesota Transfer Curriculum so there is no code for Goal 2.
- Goal 3: Natural Science (03)
- Goal 4: Mathematics/Logical Reasoning (04)
- Goal 5: History and the Social and Behavioral Sciences (05)
- Goal 6: Humanities - the Arts, Literature and Philosophy (06)
- Goal 7: Human Diversity (07)
- Goal 8: Global Perspectives (08)
- Goal 9: Ethical and Civic Responsibility (09)
- Goal 10: People and the Environment (10)

When you examine a course and its description in this catalog, these codes will help you determine which of the ten goals is/are met by that course. If you do not see one of the codes, the course is not part of the Minnesota Transfer Curriculum.



The codes are underlined in the following example:

**BIOL 1100 Environmental Biology (MnTC 03, 10)**

3 credits: 2 hours lecture/week - 2 hours lab/week

This is a one-semester course that introduces students to applied aspects of environmental science. It provides students with a broad overview of the scientific and social aspects of human impact on the environment, interrelationships among organisms and their physical environment, and current issues in environmental science. Students will examine humans' role in the natural world, the impact of the growth of the human population, and the increase in humans' technological ability to make changes in the world. Students will be encouraged to explore societal, political, economic, and personal value systems with regard to environmental issues. (Prerequisites: None).

**[This course would meet MNTC goals for Natural Sciences and People and the Environment]**

The content below provides detailed listings of RCTC courses meeting the specific requirements of each goal area within the Minnesota Transfer Curriculum (Goal Areas 1 through 10).

**Goal 1: Communication**

Minimum: 11 Credits including

- ENGL 1117, Reading and Writing Critically I, 4 cr
- ENGL 1118, Reading and Writing Critically II, 4 cr
- COMM 1114, Fundamentals of Public Speaking OR COMM 1130, Interpersonal Communication, 3 cr

**Objective:** To develop writers and speakers who use the English language effectively and who read, write, speak, and listen critically. As a base, all students should complete introductory communication requirements early in their collegiate studies. Writing competency is an ongoing process to be reinforced through writing-intensive courses and writing across the curriculum. Speaking and listening skills need reinforcement through multiple opportunities for interpersonal communication, public speaking, and discussion.

**Student Competencies for Goal 1:**

- Construct logical and coherent arguments.
- Select appropriate communication choices for specific audiences.
- Employ syntax and usage appropriate to academic disciplines and the professional world.
- Use authority, point-of-view, and individual voice and style in their writing and speaking.
- Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
- Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
- Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.

<b>RCTC courses that meet guidelines for Goal 1: Communication</b>			
COMM 1114	Fundamentals of Public Speaking	3cr.	MnTC (01)
COMM 1130	Interpersonal Communication	3cr.	MnTC (01, 07)
COMM 2100	Intercultural Communication	3cr.	MnTC (01, 08)
COMM 2130	Team/Small Group Communication	3cr.	MnTC (01)
COMM 2214	Professional Communication	3cr.	MnTC (01)
COMM 2220	Communication and Gender	3cr.	MnTC (01, 07)
ENGL 1109	Introduction to Professional and Technical Communication	3cr.	MnTC (01, 09)
ENGL 1117	Reading and Writing Critically I	4cr.	MnTC (01)
ENGL 1118	Reading and Writing Critically II	4cr.	MnTC (01)
INFS 2915	Introduction to Information Literacy: Honors	1cr.	MnTC (01)
MCOM 1245	Writing for Mass Media	3cr.	MnTC (01)

### **Goal 2: Critical Thinking**

The Critical Thinking goal is met when the student has completed the 40 credits of the Minnesota Transfer Curriculum.

### **Goal 3: Natural Science**

Minimum: 6 Credits with a minimum of two courses with a lab from two different areas that meet MnTC Goal 3

**Objective:** To improve students' understanding of natural science principles and of the methods of scientific inquiry, i.e., the ways in which scientists investigate natural science phenomena. As a basis for lifelong learning, students need to know the vocabulary of science and to realize that while a set of principles has been developed through the work of previous scientists, ongoing scientific inquiry and new knowledge will bring changes in some of the ways scientists view the world. By studying the problems that engage today's scientists, students learn to appreciate the importance of science in their lives and to understand the value of a scientific perspective. Students should be encouraged to study both the biological and physical sciences.

### **Student Competencies for Goal 3:**

- Demonstrate understanding of scientific theories.
- Communicate their experimental findings, analyses, and interpretations both orally and in writing.
- Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.
- Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.

<b>RCTC courses that meet guidelines for Goal 3: Natural Science</b>			
BIOL 1100	Environmental Biology	3cr.	MnTC (03, 10)
BIOL 1101	Elements of Biology	3cr.	MnTC (03, 09)
BIOL 1102	Plant Biology	3cr.	MnTC (03, 10)
BIOL 1107	Fundamentals of Anatomy & Physiology	4cr.	MnTC (03)
BIOL 1110	Human Biology	4cr.	MnTC (03)
BIOL 1216	Anatomy and Physiology of the Nervous & Respiratory Systems	2cr.	MnTC (03)
BIOL 1217	Anatomy & Physiology I	4cr.	MnTC (03)
BIOL 1218	Anatomy & Physiology II	4cr.	MnTC (03)
BIOL 1220	General Biology I	4cr.	MnTC (03, 10)
BIOL 1230	General Biology II	4cr.	MnTC (03)
BIOL 2000	Ecology	4cr.	MnTC (03, 10)
BIOL 2021	General Microbiology	4cr.	MnTC (03)
BIOL 2200	General Zoology	4cr.	MnTC (03)
BIOL 2300	Genetics	4cr.	MnTC (03)
BIOL 2920	General Biology I: Honors	4cr.	MnTC (03, 10)
CHEM 1031	Introduction to Forensic Chemistry	3cr.	MnTC (03)
CHEM 1100	Chemistry and Our World	3cr.	MnTC (03, 10)
CHEM 1101	Elements of Chemistry	3cr.	MnTC (03)
CHEM 1117	General, Organic and Biological Chemistry I	4cr.	MnTC (03)
CHEM 1127	Chemical Principles I	4cr.	MnTC (03)
ESCI 1004	Earthquakes and Volcanoes	3cr.	MnTC (03, 10)
ESCI 1101	Principles of Geoscience	3cr.	MnTC (03, 10)
ESCI 1114	Minnesota Rocks and Waters with Lab	4cr.	MnTC (03, 10)
ESCI 1124	Solar System Astronomy	4cr.	MnTC (03)
ESCI 1134	Stellar Astronomy	3cr.	MnTC (03)
ESCI 1144	Introduction to Environmental Geology	4cr.	MnTC (03, 10)
ESCI 1154	Introduction to Meteorology	3cr.	MnTC (03, 10)
PHYS 1101	Elements of Physics	3cr.	MnTC (03)
PHYS 1103	Principles of Physics	3cr.	MnTC (03)
PHYS 1117	Introductory Physics I	5cr.	MnTC (03)
PHYS 1118	Introductory Physics II	5cr.	MnTC (03)
PHYS 1127	Classical Physics I	5cr.	MnTC (03)
PHYS 1128	Classical Physics II	5cr.	MnTC (03)
PHYS 1134	Stellar Astronomy	3cr.	MnTC (03)
SCIE 1100	Integrated Biology and Chemistry	3cr.	MnTC (03)
SCIE 1200	Integrated Earth Science and Physics	3cr.	MnTC (03)

#### **Goal 4: Mathematical/Logical Reasoning**

Minimum: 3 Credits from MnTC Goal 4

**Objective:** To increase students' knowledge about mathematical and logical modes of thinking.

This will enable students to appreciate the breadth of applications of mathematics, evaluate arguments, and detect fallacious reasoning. Students will learn to apply mathematics, logic, and/or statistics to help them make decisions in their lives and careers. Minnesota's public higher education systems have agreed that developmental mathematics includes the first three years of a high school mathematics sequence through intermediate algebra.

#### Student Competencies for Goal 4:

- Clearly express mathematical/logical ideas in writing.
- Apply higher-order problem-solving and/or modeling strategies.
- Explain what constitutes a valid mathematical/logical argument(proof).
- Illustrate historical and contemporary applications of mathematical/logical systems.

RCTC courses that meet guidelines for Goal 4: Mathematical/Logical Reasoning			
MATH 1050	Foundations of Mathematics: Algebra Emphasis	3cr.	MnTC (04)
MATH 1060	Foundations of Mathematics: Geometry Emphasis	3cr.	MnTC (04)
MATH 1090	Statway Statistics II	4cr.	MnTC (04)
MATH 1111	Quantitative Reasoning	3cr.	MnTC (04)
MATH 1113	Finite Math with College Algebra	3cr.	MnTC (04)
MATH 1115	College Algebra	3cr.	MnTC (04)
MATH 1117	Precalculus	4cr.	MnTC (04)
MATH 1119	Applied Calculus	3cr.	MnTC (04)
MATH 1127	Calculus I	5cr.	MnTC (04)
MATH 1128	Calculus II	5cr.	MnTC (04)
MATH 2208	Fundamentals of Statistics	4cr.	MnTC (04)
PHIL 1145	Logic	3cr.	MnTC (04)

#### Goal 5: History/Social/Behavioral Sciences

Minimum: 9 Credits with a minimum of two credits from each of three areas from MnTC Goal 5

**Objective:** To increase student's knowledge of how historians and social and behavioral scientists discover, describe, and explain the behaviors and interactions among individuals, groups, institutions, events, and ideas. Such knowledge will better equip students to understand themselves and the roles they play in addressing the issues facing humanity.

#### Student Competencies for Goal 5:

- Use and critique alternative explanatory systems or theories.
- Examine social institutions and processes across a range of historical periods and cultures.
- Develop and communicate alternative explanations or solutions for contemporary social issues.
- Employ the methods and data that historians and social and behavioral scientists use to investigate the human condition.

<b>RCTC courses that meet guidelines for Goal 5: History/Social/Behavioral Sciences</b>			
ANTH 1612	Cultural Anthropology	3cr.	MnTC (05, 08)
COMM 1110	Introduction to Mass Communication	3cr.	MnTC (05, 09)
COMM 1337	Social Media	3cr.	MnTC (05)
ECON 1101	Introduction to Economics	3cr.	MnTC (05, 10)
ECON 2214	Principles of Economics: Micro	4cr.	MnTC (05, 10)
ECON 2215	Principles of Economics: Macro	4cr.	MnTC (05, 08)
GEOG 1614	Human Geography	3cr.	MnTC (05, 08)
HIST 1613	Western Civilization I: Ancient Times to 1715	3cr.	MnTC (05, 08)
HIST 1614	Western Civilization II: The Modern Age 1715-Present	3cr.	MnTC (05, 08)
HIST 1617	World History to 1500	3cr.	MnTC (05, 08)
HIST 1618	World History Since 1500	3cr.	MnTC (05, 08)
HIST 1622	Minnesota History	3cr.	MnTC (05, 10)
HIST 1624	U.S. History to 1865	3cr.	MnTC (05, 07)
HIST 1625	U.S. History 1865-Present	3cr.	MnTC (05, 07)
HIST 1789	History of the American Presidency	3cr.	MnTC (05, 09)
HIST 2070	History of the Rock and Roll Era	3cr.	MnTC (05, 07)
POLS 1615	Introduction to American Government	3cr.	MnTC (05, 09)
POLS 1619	International Relations	3cr.	MnTC (05, 08)
PSYC 1611	Psychology of Adjustment	3cr.	MnTC (05, 07)
PSYC 1650	Evolution and Human Behavior	3cr.	MnTC (05, 10)
PSYC 1660	Health Psychology	3cr.	MnTC (05, 07)
PSYC 2611	Social Psychology	3cr.	MnTC (05, 07)
PSYC 2618	General Psychology	4cr.	MnTC (05, 07)
PSYC 2620	Introduction to Cultural Psychology	3cr.	MnTC (05, 08)
PSYC 2622	Abnormal Psychology	3cr.	MnTC (05, 07)
PSYC 2626	Human Growth & Development	3cr.	MnTC (05, 07)
PSYC 2630	Statistics for the Behavioral Sciences	4cr.	MnTC (05)
PSYC 2918	General Psychology: Honors	4cr.	MnTC (05, 07)
SOC 1612	Sex and Gender in Society	3cr.	MnTC (05, 07)
SOC 1614	Introduction to Sociology	3cr.	MnTC (05, 07)
SOC 1616	Social Problems	3cr.	MnTC (05, 09)
SOC 1618	Environmental Sociology	3cr.	MnTC (05, 10)
SOC 2612	Marriage and the Family Across the Life Span	3cr.	MnTC (05, 07)
SOC 2625	Minority Group Relations	3cr.	MnTC (05, 07)

### **Goal 6: Humanities/Fine Arts**

Minimum: 9 Credits with a minimum of two credits from each of three areas from MnTC Goal 6

**Objective:** To expand students' knowledge of the human condition and human cultures, especially in relation to behavior, ideas, and values expressed in works of human imagination and thought. Through study in disciplines such as literature, philosophy, and the fine arts, students will engage in critical analysis, form aesthetic judgments, and develop an appreciation

of the arts and humanities as fundamental to the health and survival of any society. Students should have experiences in both the arts and humanities.

### Student Competencies for Goal 6:

- Respond critically to works in the arts and humanities.
- Engage in the creative process or interpretive performance.
- Articulate an informed personal reaction to works in the arts and humanities.
- Demonstrate awareness of the scope and variety of works in the arts and humanities.
- Understand those works as expressions of individual and human values within an historical and social context.

<b>RCTC courses that meet guidelines for Goal 6: Humanities/Fine Arts</b>			
ART 1010	Introduction to Art	3cr.	MnTC (06)
ART 1110	Art Appreciation	3cr.	MnTC (06, 08)
ART 1111	Art History Survey I	3cr.	MnTC (06, 08)
ART 1112	Art History Survey II	3cr.	MnTC (06, 08)
ART 1120	Computer as Creative Media	3cr.	MnTC (06)
ART 1121	2D Design	3cr.	MnTC (06)
ART 1123	3D Design	3cr.	MnTC (06)
ART 1124	Graphic Design I	3cr.	MnTC (06)
ART 1130	Digital Art I	3cr.	MnTC (06)
ART 1134	Drawing I	3cr.	MnTC (06)
ART 1144	Painting I	3cr.	MnTC (06)
ART 1164	Ceramics I	3cr.	MnTC (06)
ART 1184	Photography I	3cr.	MnTC (06)
ART 1212	Figure Drawing	3cr.	MnTC (06)
ART 1232	Web Design I	3cr.	MnTC (06)
ART 1290	Media Arts	3cr.	MnTC (06)
ART 1337	Art and Code	3cr.	MnTC (06)
COMM 1106	Cinema as Communication	3cr.	MnTC (06, 07)
COMM 1125	Oral Interpretation of Literature	3cr.	MnTC (06, 09)
COMP 1337	Art and Code	3cr.	MnTC (06)
ENGL 1125	Women's Perspectives	3cr.	MnTC (06, 08)
ENGL 1150	Introduction to Creative Writing	3cr.	MnTC (06)
ENGL 2252	Writing Poetry	3cr.	MnTC (06)
ENGL 2255	Shakespeare: Screen, Stage, and Page	3cr.	MnTC (06, 08)
ENGL 2273	Early American Literature	3cr.	MnTC (06, 07)
ENGL 2276	Introduction to Literary Studies: Best Sellers	3cr.	MnTC (06, 07)
ENGL 2282	Dystopian Literature	3cr.	MnTC (06, 09)
ENGL 2283	African American Literature	3cr.	MnTC (06, 09)
ENGL 2284	Literature and the Environment	3cr.	MnTC (06, 10)
ENGL 2290	Fiction Writing	3cr.	MnTC (06)
ENGL 2297	Children's Literature	3cr.	MnTC (06, 07)

ENGL 2298	Young Adult Literature	3cr.	MnTC (06, 07)
ENGL 2978	The Bible as Literature: Honors	3cr.	MnTC (06, 08)
FREN 1101	Beginning French I	4cr.	MnTC (06, 08)
FREN 1102	Beginning French II	4cr.	MnTC (06, 08)
HUM 1001	Introduction to Hispanic Cultures	3cr.	MnTC (06, 08)
HUM 1111	Western Humanities I: Antiquity to 1616	3cr.	MnTC (06, 08)
HUM 1112	Western Humanities II: 1617 to the Present	3cr.	MnTC (06, 08)
HUM 1131	Introduction to the Humanities	3cr.	MnTC (06)
HUM 1190	Native American Studies	3cr.	MnTC (06, 07)
HUM 1500	Compassion Studies	3cr.	MnTC (06, 09)
HUM 1841	Studies in Leadership	4cr.	MnTC (06, 09)
HUM 2121	Women's Issues Around the World	3cr.	MnTC (06, 08)
HUM 2255	Shakespeare: Screen, Stage, and Page	3cr.	MnTC (06, 08)
MUSC 1001	Music Fundamentals	3cr.	MnTC (06)
MUSC 1101	Music Appreciation	3cr.	MnTC (06)
MUSC 1221	Popular Music in the United States	3cr.	MnTC (06)
MUSC 1231	Introduction to World Music	3cr.	MnTC (06, 08)
MUSC 1321	Aires	1cr.	MnTC (06)
MUSC 1322	Jazz Band	1cr.	MnTC (06)
MUSC 1340	World Drum Ensemble	1cr.	MnTC (06, 08)
MUSC 1401	Beginning Class Piano	3cr.	MnTC (06)
MUSC 1421	Beginning Class Voice	3cr.	MnTC (06)
MUSC 1431	Beginning Guitar Class	3cr.	MnTC (06)
MUSC 1450	Applied Music - Vocal	1cr.	MnTC (06)
MUSC 1501	Musicianship I	4cr.	MnTC (06)
PHIL 1114	Introduction to Philosophy	3cr.	MnTC (06, 08)
PHIL 1125	Ethics	3cr.	MnTC (06, 09)
PHIL 1130	Environmental Ethics	3cr.	MnTC (06, 10)
PHIL 1135	Bioethics	3cr.	MnTC (06, 09)
PHIL 1150	Computing and AI Ethics	3cr.	MnTC (06, 09)
PHIL 1160	Philosophy and World Religions	3cr.	MnTC (06, 08)
PHIL 2001	Science Fiction and Philosophy	3cr.	MnTC (06, 07)
PHIL 2130	Business Ethics	3cr.	MnTC (06, 09)
SPAN 1001	Introduction to Hispanic Cultures	3cr.	MnTC (06, 08)
SPAN 1101	Beginning Spanish I	4cr.	MnTC (06, 08)
SPAN 1102	Beginning Spanish II	4cr.	MnTC (06, 08)
SPAN 1130	Introductory Medical Spanish	3cr.	MnTC (06, 08)
SPAN 2101	Intermediate Spanish I	4cr.	MnTC (06, 08)
THTR 1121	Beginning Acting	3cr.	MnTC (06)
THTR 1134	Theatre Appreciation	3cr.	MnTC (06, 08)
THTR 1135	Stagecraft	3cr.	MnTC (06)
THTR 2102	Beginning Directing	3cr.	MnTC (06)

**Goal 7: Human Diversity**

Minimum: 2 Credits

**Objective:** To increase students' understanding of individual and group differences (e.g., race, gender, class) and their knowledge of the traditions and values of various groups in the United States. Students should be able to evaluate the United States' historical and contemporary responses to group differences.

**Student Competencies for Goal 7:**

- Analyze their own attitudes, behaviors, concepts and beliefs regarding diversity, racism, and bigotry.
- Understand the development of and the changing meanings of group identities in the United States' history and culture.
- Demonstrate communication skills necessary for living and working effectively in a society with great population diversity.
- Demonstrate an awareness of the individual and institutional dynamics of unequal power relations between groups in contemporary society.
- Describe and discuss the experience and contributions (political, social, economic, etc.) of the many groups that shape American society and culture, in particular those groups that have suffered discrimination and exclusion.

<b>RCTC courses that meet guidelines for Goal 7: Human Diversity</b>			
COMM 1106	Cinema as Communication	3cr.	MnTC (06, 07)
COMM 1130	Interpersonal Communication	3cr.	MnTC (01, 07)
COMM 2220	Communication and Gender	3cr.	MnTC (01, 07)
ECCE 2110	Diversity and Human Relations	3cr.	MnTC (07)
ENGL 2276	Introduction to Literary Studies: Best Sellers	3cr.	MnTC (06, 07)
ENGL 2297	Children's Literature	3cr.	MnTC (06, 07)
ENGL 2298	Young Adult Literature	3cr.	MnTC (06, 07)
HIST 1624	U.S. History to 1865	3cr.	MnTC (05, 07)
HIST 1625	U.S. History 1865-Present	3cr.	MnTC (05, 07)
HIST 2070	History of the Rock and Roll Era	3cr.	MnTC (05, 07)
HUM 1190	Native American Studies	3cr.	MnTC (06, 07)
PHIL 2001	Science Fiction and Philosophy	3cr.	MnTC (06, 07)
PHIL 2112	Political Philosophy	3cr.	MnTC (06, 07)
PSYC 1611	Psychology of Adjustment	3cr.	MnTC (05, 07)
PSYC 1660	Health Psychology	3cr.	MnTC (05, 07)
PSYC 2611	Social Psychology	3cr.	MnTC (05, 07)
PSYC 2618	General Psychology	4cr.	MnTC (05, 07)
PSYC 2622	Abnormal Psychology	3cr.	MnTC (05, 07)
PSYC 2626	Human Growth & Development	3cr.	MnTC (05, 07)
PSYC 2918	General Psychology: Honors	4cr.	MnTC (05, 07)



SOC 1612	Sex and Gender in Society	3cr.	MnTC (05, 07)
SOC 1614	Introduction to Sociology	3cr.	MnTC (05, 07)
SOC 2612	Marriage and the Family Across the Life Span	3cr.	MnTC (05, 07)
SOC 2625	Minority Group Relations	3cr.	MnTC (05, 07)

### Goal 8: Global Perspective

Minimum: 2 Credits

**Objective:** To increase students' understanding of the growing interdependence of nations and peoples and develop their ability to apply a comparative perspective to cross-cultural social, economic, and political experiences.

#### Student Competencies for Goal 8:

- Demonstrate knowledge of cultural, social, religious and linguistic differences.
- Understand the role of a world citizen and the responsibility world citizens share for their common global future.
- Analyze specific international problems, illustrating the cultural, economic, and political differences that affect their solution.
- Describe and analyze political, economic, and cultural elements which influence relations of states and societies in their historical and contemporary dimensions.

RCTC courses that meet guidelines for Goal 8: Global Perspective			
ANTH 1612	Cultural Anthropology	3cr.	MnTC (05, 08)
ART 1110	Art Appreciation	3cr.	MnTC (06, 08)
ART 1111	Art History Survey I	3cr.	MnTC (06, 08)
ART 1112	Art History Survey II	3cr.	MnTC (06, 08)
ASL 1107	American Sign Language I	3cr.	MnTC (08)
ASL 1108	American Sign Language II	3cr.	MnTC (08)
COMM 2100	Intercultural Communication	3cr.	MnTC (01, 08)
ECON 2215	Principles of Economics: Macro	4cr.	MnTC (05, 08)
ENGL 1125	Women's Perspectives	3cr.	MnTC (06, 08)
ENGL 2255	Shakespeare: Screen, Stage, and Page	3cr.	MnTC (06, 08)
FREN 1101	Beginning French I	4cr.	MnTC (06, 08)
FREN 1102	Beginning French II	4cr.	MnTC (06, 08)
GEOG 1614	Human Geography	3cr.	MnTC (05, 08)
GEOG 1615	Economic Geography	3cr.	MnTC (08, 10)
HIST 1613	Western Civilization I: Ancient Times to 1715	3cr.	MnTC (05, 08)
HIST 1614	Western Civilization II: The Modern Age 1715-Present	3cr.	MnTC (05, 08)
HIST 1617	World History to 1500	3cr.	MnTC (05, 08)
HIST 1618	World History Since 1500	3cr.	MnTC (05, 08)
HUM 1001	Introduction to Hispanic Cultures	3cr.	MnTC (06, 08)
HUM 2121	Women's Issues Around the World	3cr.	MnTC (06, 08)
HUM 2255	Shakespeare: Screen, Stage, and Page	3cr.	MnTC (06, 08)

MUSC 1231	Introduction to World Music	3cr.	MnTC (06, 08)
MUSC 1340	World Drum Ensemble	1cr.	MnTC (06, 08)
PHIL 1114	Introduction to Philosophy	3cr.	MnTC (06, 08)
PHIL 1160	Philosophy and World Religions	3cr.	MnTC (06, 08)
POLS 1619	International Relations	3cr.	MnTC (05, 08)
PSYC 2620	Introduction to Cultural Psychology	3cr.	MnTC (05, 08)
SPAN 1001	Introduction to Hispanic Cultures	3cr.	MnTC (06, 08)
SPAN 1101	Beginning Spanish I	4cr.	MnTC (06, 08)
SPAN 1102	Beginning Spanish II	4cr.	MnTC (06, 08)
SPAN 1130	Introductory Medical Spanish	3cr.	MnTC (06, 08)
SPAN 2101	Intermediate Spanish I	4cr.	MnTC (06, 08)
SPAN 2102	Intermediate Spanish II	4cr.	MnTC (06, 08)
THTR 1134	Theatre Appreciation	3cr.	MnTC (06, 08)

### Goal 9: Ethical/Civic Resp

Minimum: 2 Credits

**Objective:** To develop students' capacity to identify, discuss, and reflect upon the ethical dimensions of political, social, and personal life and to understand the ways in which they can exercise responsible and productive citizenship. While there are diverse views of social justice or the common good in a pluralistic society, students should learn that responsible citizenship requires them to develop skills to understand their own and others' positions, be part of the free exchange of ideas, and function as public-minded citizens.

#### Student Competencies for Goal 9:

- Examine, articulate, and apply their own ethical views.
- Recognize the diversity of political motivations and interests of others.
- Identify ways to exercise the rights and responsibilities of citizenship.
- Analyze and reflect on the ethical dimensions of legal, social, and scientific issues.
- Understand and apply core concepts (e.g. politics, rights and obligations, justice, liberty) to specific issues.

RCTC courses that meet guidelines for Goal 9: Ethical/Civic Resp			
BIOL 1101	Elements of Biology	3cr.	MnTC (03, 09)
COMM 1110	Introduction to Mass Communication	3cr.	MnTC (05, 09)
COMM 1125	Oral Interpretation of Literature	3cr.	MnTC (06, 09)
ENGL 1109	Introduction to Professional and Technical Communication	3cr.	MnTC (01, 09)
ENGL 2282	Dystopian Literature	3cr.	MnTC (06, 09)
ENGL 2283	African American Literature	3cr.	MnTC (06, 09)
HIST 1789	History of the American Presidency	3cr.	MnTC (05, 09)
HUM 1500	Compassion Studies	3cr.	MnTC (06, 09)
HUM 1841	Studies in Leadership	4cr.	MnTC (06, 09)
MCOM 2210	Introduction to Public Relations	3cr.	MnTC (09)

PHIL 1125	Ethics	3cr.	MnTC (06, 09)
PHIL 1135	Bioethics	3cr.	MnTC (06, 09)
PHIL 1150	Computing and AI Ethics	3cr.	MnTC (06, 09)
PHIL 2130	Business Ethics	3cr.	MnTC (06, 09)
POLS 1615	Introduction to American Government	3cr.	MnTC (05, 09)
SOC 1616	Social Problems	3cr.	MnTC (05, 09)

### Goal 10: People/Environment

Minimum: 2 Credits

**Objective:** To improve students' understanding of today's complex environmental challenges. Students will examine the interrelatedness of human society and the natural environment. Knowledge of both bio-physical principles and socio-cultural systems is the foundation for integrative and critical thinking about environmental issues.

#### Student Competencies for Goal 10:

- Propose and assess alternative solutions to environmental problems.
- Articulate and defend the actions they would take on various environmental issues.
- Discern patterns and interrelationships of bio-physical and socio-cultural systems.
- Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
- Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
- Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.

RCTC courses that meet guidelines for Goal 10: People/Environment			
BIOL 1100	Environmental Biology	3cr.	MnTC (03, 10)
BIOL 1102	Plant Biology	3cr.	MnTC (03, 10)
BIOL 1220	General Biology I	4cr.	MnTC (03, 10)
BIOL 2000	Ecology	4cr.	MnTC (03, 10)
BIOL 2920	General Biology I: Honors	4cr.	MnTC (03, 10)
CHEM 1100	Chemistry and Our World	3cr.	MnTC (03, 10)
ECON 1101	Introduction to Economics	3cr.	MnTC (05, 10)
ECON 2214	Principles of Economics: Micro	4cr.	MnTC (05, 10)
ENGL 2284	Literature and the Environment	3cr.	MnTC (06, 10)
ESCI 1004	Earthquakes and Volcanoes	3cr.	MnTC (03, 10)
ESCI 1101	Principles of Geoscience	3cr.	MnTC (03, 10)
ESCI 1114	Minnesota Rocks and Waters with Lab	4cr.	MnTC (03, 10)
ESCI 1144	Introduction to Environmental Geology	4cr.	MnTC (03, 10)
ESCI 1154	Introduction to Meteorology	3cr.	MnTC (03, 10)
GEOG 1615	Economic Geography	3cr.	MnTC (08, 10)

HIST 1622	Minnesota History	3cr.	MnTC (05, 10)
PHIL 1130	Environmental Ethics	3cr.	MnTC (06, 10)
PSYC 1650	Evolution and Human Behavior	3cr.	MnTC (05, 10)
SOC 1618	Environmental Sociology	3cr.	MnTC (05, 10)

## AWARD INFORMATION

### **Undergraduate Certificate:**

An undergraduate certificate is awarded for successful completion of a specialized set of skills or program of study. Certificates range in length from 9-30 credits. Several certificates are intended to be portions of diploma or degrees. Thus, a student completing certain certificates will have completed a skill set that is part of a series of skills that may be used to complete a diploma or an associate degree. At least one-third of the credits in a certificate must be earned at RCTC.

### **Diploma:**

A diploma is awarded for successful completion of a program intended to provide students with a series of employment skill sets beyond the certificate. A diploma ranges in length from 31-69 semester credits. At least one-third of the credits in a diploma must be earned at RCTC.

### **Associate of Applied Science Degree:**

An Associate of Applied Science Degree (AAS) is intended to prepare students for employment. Increasingly, however, AAS degrees articulate to Bachelor of Applied Science degrees (BAS) with transfer institutions. An Associate of Applied Science Degree (AAS) is awarded for the successful completion of a program of 60-81 semester credits. At least 15 semester credits must be earned at RCTC.

An AAS degree includes a minimum of 15 credits in general education selected from at least three of the ten Minnesota Transfer Curriculum goal areas. Specific requirements within this general education requirement vary depending upon the purpose of the degree. At least 30 semester credits shall be program-related, occupational, or technical credits. Students considering eventual transfer to a four-year institution should be mindful of Minnesota Transfer Curriculum (MnTC) courses when selecting general education options in an AAS degree. Courses not listed as MnTC courses may not be accepted by a transfer institution.

### **Associate of Science Degree:**

An Associate of Science Degree (AS) is intended to prepare the student for employment in a designated field or area OR to prepare the student in a designated field or area which transfers to a baccalaureate major (BS) in a related scientific or technical field. Increasingly the AS degree is intended to meet the first two years of requirements for a specific

baccalaureate program (BS). An Associate of Science degree is awarded after the successful completion of a program of 60-75 semester credits. An Associate of Science degree requires a minimum of 30 semester credits in general education selected from at least six of the ten goal areas of the Minnesota Transfer Curriculum (MnTC). At least 15 semester credits must be earned at RCTC.

Associate of Science degrees articulate with four-year programs. To maximize transferability, when possible, students should choose general education courses identified as MnTC courses when completing an AS degree. An AS degree may even include the entire 40 credit Minnesota Transfer Curriculum.

### **Associate of Arts Degree:**

An Associate of Arts degree (AA) is intended to complete the first two years of a baccalaureate degrees (BA and/or BS). An Associate of Arts degree is awarded after the successful completion of a program of 60 semester credits. At least 15 semester credits must be earned at RCTC. An Associate of Arts degree requires completion of the entire 40 credit curriculum Minnesota Transfer Curriculum.

### **Associate of Fine Arts Degree:**

An Associate of Fine Arts (AFA) degree is awarded for study in music or art at Rochester Community and Technical College. The AFA is awarded for successful completion of a program of 60 semester credits; at least 15 semester credits must be earned at RCTC. The degree contains part of the Minnesota Transfer Curriculum (MnTC) and is articulated with at least one other baccalaureate-granting institution with a comparable music or art degree program. The AFA, by virtue of its concentration of art or music study in the two-year degree, can also prepare students for immediate employment in the arts.
















## ACADEMIC PROGRAMS

Program	Awards	Credits	Program Plan	Online Option
<a href="#">Accessory Dwelling Unit</a>	Cert	19	<a href="#">PLAN</a> 	
<a href="#">Accounting Clerk</a>	Diploma	31	<a href="#">PLAN</a> 	
<a href="#">Accounting Transfer Pathway</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Administrative Office Professional</a>	Diploma	31	<a href="#">PLAN</a> 	<b>ONLINE</b> 
<a href="#">Advanced Hospital Nursing Assistant</a>	Cert	16	<a href="#">PLAN</a> 	
<a href="#">Alcohol and Drug Counseling</a>	Cert	26	<a href="#">PLAN</a> 	
<a href="#">Alcohol and Drug Counseling</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Art Transfer Pathway</a>	AFA	60	<a href="#">PLAN</a> 	
<a href="#">Automotive Technician</a>	Diploma	67	<a href="#">PLAN</a> 	
<a href="#">Aviation Pilot</a>	AAS	60	<a href="#">PLAN</a> 	
<a href="#">Bioinformatics Foundations</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Biology Transfer Pathway</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Business Administration</a>	Cert	21	<a href="#">PLAN</a> 	
<a href="#">Business Analysis</a> (Only available through Business and Workforce Education)	Cert	9	<a href="#">PLAN</a> 	

## ACADEMIC PROGRAMS


Program	Awards	Credits	Program Plan	Online Option
<a href="#">Business Management</a>	AAS	60	<a href="#">PLAN</a> 	
<a href="#">Business Management</a>	Cert	13	<a href="#">PLAN</a> 	
<a href="#">Business Management - Hospitality</a>	AAS	60	<a href="#">PLAN</a> 	
<a href="#">Business Management - Marketing</a>	AAS	60	<a href="#">PLAN</a> 	
<a href="#">Business Transfer Pathway</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">CAD (Computer Aided Drafting) Technology</a>	Diploma	36	<a href="#">PLAN</a> 	
<a href="#">Cancer Registry Management</a>	AAS	60	<a href="#">PLAN</a> 	ONLINE 
<a href="#">Cancer Registry Management</a>	Cert	26	<a href="#">PLAN</a> 	ONLINE 
<a href="#">Cardiovascular Invasive Specialist</a>	AAS	63	<a href="#">PLAN</a> 	
<a href="#">Carpentry</a>	Diploma	32	<a href="#">PLAN</a> 	
<a href="#">Chemistry Transfer Pathway</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Child Development</a>	Cert	16	<a href="#">PLAN</a> 	
<a href="#">Clinical Neurophysiology Technology</a>	AAS	81	<a href="#">PLAN</a> 	
<a href="#">Coaching</a>	Diploma	35	<a href="#">PLAN</a> 	
<a href="#">Coding Specialist</a>	Diploma	40	<a href="#">PLAN</a> 	ONLINE 

## ACADEMIC PROGRAMS

















Program	Awards	Credits	Program Plan	Online Option
<a href="#">Communication Studies</a>	Cert	16	<a href="#">PLAN</a> 	<b>ONLINE</b> 
<a href="#">Communication Studies Transfer Pathway</a>	AA	60	<a href="#">PLAN</a> 	
<a href="#">Community Health Worker</a> (Only available through Business and Workforce Education)	Cert	16	<a href="#">PLAN</a> 	
<a href="#">Computer Information Systems</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Computer Science Transfer Pathway</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Criminal Justice Transfer Pathway</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Cybersecurity</a>	AAS	60	<a href="#">PLAN</a> 	
<a href="#">Dental Assistant</a>	AAS	64	<a href="#">PLAN</a> 	
<a href="#">Dental Assistant</a>	Diploma	47	<a href="#">PLAN</a> 	
<a href="#">Dental Assistant Expanded Functions</a>	Cert	13	<a href="#">PLAN</a> 	
<a href="#">Dental Hygiene</a>	AAS	83	<a href="#">PLAN</a> 	
<a href="#">Digital Marketing Specialist</a>	Cert	17	<a href="#">PLAN</a> 	
<a href="#">Early Childhood Education Transfer Pathway</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Emergency Medical Technology</a>	Cert	24	<a href="#">PLAN</a> 	











## ACADEMIC PROGRAMS

Program	Awards	Credits	Program Plan	Online Option
<a href="#">Emergency Medicine Paramedic</a>	AS	75	<a href="#">PLAN</a> 	
<a href="#">Engineering Broad Field</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Environmental Science</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Executive Office Professional</a>	AAS	60	<a href="#">PLAN</a> 	ONLINE 
<a href="#">Facility and Service Technology</a>	AAS	69	<a href="#">PLAN</a> 	
<a href="#">Facility and Service Technology</a>	Diploma	69	<a href="#">PLAN</a> 	
<a href="#">Graphic Design</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Group Fitness Instructor</a>	Cert	27	<a href="#">PLAN</a> 	
<a href="#">Health Information Technology</a>	AAS	64	<a href="#">PLAN</a> 	ONLINE 
<a href="#">Health Sciences Broad Field</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Healthcare Informatics</a>	Diploma	32	<a href="#">PLAN</a> 	ONLINE 
<a href="#">Healthcare Office Professional</a>	AAS	60	<a href="#">PLAN</a> 	ONLINE 
<a href="#">Healthcare Office Professional</a>	Cert	23	<a href="#">PLAN</a> 	ONLINE 
<a href="#">Histology Technician</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">History Transfer Pathway</a>	AA	60	<a href="#">PLAN</a> 	










## ACADEMIC PROGRAMS

Program	Awards	Credits	Program Plan	Online Option
<a href="#">Hospitality Management</a>	Cert	12	<a href="#">PLAN</a> 	
<a href="#">Individualized Studies</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Information Technology</a>	AAS	60	<a href="#">PLAN</a> 	
<a href="#">Laboratory Science</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Liberal Arts and Sciences</a>	AA	60	<a href="#">PLAN</a> 	ONLINE 
<a href="#">Magnetic Resonance Imaging (MRI)</a>	AAS	63	<a href="#">PLAN</a> 	
<a href="#">Mass Communication</a>	Cert	24	<a href="#">PLAN</a> 	
<a href="#">Mass Communication Transfer Pathway</a>	AA	60	<a href="#">PLAN</a> 	
<a href="#">Mathematics Transfer Pathway</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Music Creative Technologies</a>	AFA	60	<a href="#">PLAN</a> 	
<a href="#">Music Technology</a>	Cert	20	<a href="#">PLAN</a> 	
<a href="#">Nursing</a>	AS	64	<a href="#">PLAN</a> 	
<a href="#">Peace Officer</a>	Cert	28	<a href="#">PLAN</a> 	
<a href="#">Peace Officer</a>	AAS	60	<a href="#">PLAN</a> 	
<a href="#">Peace Officer Transfer Pathway</a>	AS	68	<a href="#">PLAN</a> 	

## ACADEMIC PROGRAMS

Program	Awards	Credits	Program Plan	Online Option
<a href="#">Peace Officer - Skills</a>	Cert	12	<a href="#">PLAN</a> 	
<a href="#">Personal Trainer</a>	Diploma	38	<a href="#">PLAN</a> 	
<a href="#">Photography</a>	Cert	18	<a href="#">PLAN</a> 	
<a href="#">Practical Nursing</a>	Diploma	39	<a href="#">PLAN</a> 	
<a href="#">Pre-Social Work Transfer Pathway</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Psychology Transfer Pathway</a>	AA	60	<a href="#">PLAN</a> 	
<a href="#">Radiography</a>	AAS	81	<a href="#">PLAN</a> 	
<a href="#">Science Foundations</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Science Foundations A</a>	Cert	19	<a href="#">PLAN</a> 	
<a href="#">Science Foundations B</a>	Cert	21	<a href="#">PLAN</a> 	
<a href="#">Sociology Transfer Pathway</a>	AA	60	<a href="#">PLAN</a> 	
<a href="#">Sport Management</a>	AS	60	<a href="#">PLAN</a> 	<b>ONLINE</b> 
<a href="#">Supervisory Leadership</a> (Only available through Business and Workforce Education)	Cert	16	<a href="#">PLAN</a> 	

## ACADEMIC PROGRAMS

Program	Awards	Credits	Program Plan	Online Option
<a href="#">Supervisory Leadership</a> (Only available through Business and Workforce Education)	AAS	60	<a href="#">PLAN</a> 	
<a href="#">Supervisory Leadership: Employee Development</a> (Only available through Business and Workforce Education)	Cert	17	<a href="#">PLAN</a> 	
<a href="#">Surgical Technology</a>	AAS	60	<a href="#">PLAN</a> 	
<a href="#">Trade Readiness</a>	Cert	16	<a href="#">PLAN</a> 	
<a href="#">Veterinary Technician</a>	AAS	75	<a href="#">PLAN</a> 	
<a href="#">Web Design</a>	AS	60	<a href="#">PLAN</a> 	
<a href="#">Welding Technology</a>	Cert	16	<a href="#">PLAN</a> 	
<a href="#">Workplace Communication</a>	Cert	9	<a href="#">PLAN</a> 	<b>ONLINE</b> 

RCTC has 94 program plans/awards.

# RCTC PROGRAM PLAN

## ACCESSORY DWELLING UNIT

Certificate

### I. PROGRAM CORE REQUIREMENTS.....19 CREDITS

- CR 1623, Rough Framing, 5 cr.
- CR 1625, Footings and Foundations, 2 cr.
- CR 1627, Roof Systems, 2 cr.
- CR 1635, Shop Practice II, 2 cr.
- CR 1636, Interior Finishing, 4 cr.
- CR 1637, Exterior Finishing, 4 cr.

**TOTAL.....19 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Accessory Dwelling Unit at RCTC learners will achieve the following outcomes:

- Show skills in communication, confident decision-making, and teamwork enabling students to work as a productive member of a construction crew.
- Demonstrate the safe use of the appropriate tools, materials, and techniques as required to carry out work on a building project.
- Read and interpret information from blueprints and specifications.
- Estimate materials and labor costs to complete a building project.
- Perform general carpentry skills, apply codes, and safety standards.
- Adapt a sense of pride, professionalism, and the desire to progress and excel in the construction trades.
- Build character and gain confidence to seek employment within the skilled trades.

### **ADDITIONAL NOTES:**

**PURPOSE:** The Accessory Dwelling Unit Certificate is for individuals entering the construction industry or DIYers who want to design and build their own accessory dwelling unit. The curriculum covers all the must-knows for accessory dwelling units including hands-on experience designing and building an accessory dwelling unit.

**CURRICULUM:** The RCTC Carpentry course outcomes will be met utilizing the PACT (Pre-Apprenticeship Certificate Training) curriculum developed by the Home Builder's Institute. Home Builders Institute (HBI) is the nation's leading educational resource for career technical education in the building industry. Vetted by subject matter experts, the award-winning curricula is based on the National Association of Home Builders' (NAHB) Green Building Standard™ and National Skills Standards and is one of only three pre-apprenticeship curricula recognized by the Department of Labor (DOL).

# RCTC PROGRAM PLAN

The PACT CORE curriculum includes the following areas of focus: basic safety, trade math and measurement, an introduction to tools and materials in residential construction, and employability skills. The PACT Building Construction Technology (BCT) curriculum includes: tool and material identification and use; work order comprehension and application; drywall and tile repair; minor plumbing, carpentry, electrical, and appliance repair; preventive maintenance application; grounds maintenance; and basic exterior building maintenance.

**SCHEDULE:** This certificate can be delivered as a six-week, consolidated course, or weekly throughout the semester.

Date of Implementation: Fall 2023

Date of Revisions: 5/14/2023

Date of Origin:

# RCTC PROGRAM PLAN

## ACCOUNTING CLERK

Diploma

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS..... 7 CREDITS**

ENGL 1109, Introduction to Professional and Technical Communication, 3 cr **OR**

ENGL 1117, Reading and Writing Critically I, 4 cr

Remaining 3-4 credits to be taken from MnTC Courses

### II. PROGRAM CORE REQUIREMENTS.....17 CREDITS

ACCT 1814, Payroll Accounting, 3 cr

ACCT 2217, Financial Accounting, 4 cr

ACCT 2218, Managerial Accounting, 4 cr

ACCT 2234, Computerized Accounting & Business Applications, 3 cr

ACCT 2237, Accounting and Business Information Technology, 3 cr

### III. BUSINESS RELATED ELECTIVES.....7 CREDITS

(Select any ACCT, BUS, ECON courses)

**TOTAL.....31 CREDITS**

### PROGRAM OUTCOMES:

Upon completion of the Accounting Clerk program at RCTC, students will achieve the following outcomes:

- Record, analyze, interpret, and report financial transactions using Generally Accepted Accounting Principles (GAAP) and other professional accounting standards and laws.
- Develop and use critical thinking processes to compare detailed expected results to actual reported information.
- Utilize technology including accounting software, spreadsheets, database, and other accounting information software when reporting financial information.
- Analyze, interpret, and report financial data and non-financial information to aid decision-makers within an organization.
- Use clear and concise oral and written communication methods to convey financial and non-financial information effectively to different users.

### ADDITIONAL NOTES:

**PURPOSE:** The Accounting Clerk Diploma prepares students to process manual or computerized accounting records for a business, such as recording and posting sales invoices, disbursements, deductions from payroll, and record interest charges. Documents prepared may include vouchers, invoices, account statements, payrolls, periodic reports, bank statements, reconciliation, etc.

The program prepares students for positions with titles such as accounting clerk, accounts payable clerk (with accounting duties specified, accounts receivable clerk, advance payment clerk (clerical), billing clerk, cash posting clerk, tax record clerk, and payroll clerk.

# RCTC PROGRAM PLAN

The Accounting Clerk diploma program is designed as an occupational program leading to employment upon graduation. If pursuing further education, check with receiving institution regarding which RCTC credits will transfer because each college or university determines what credits will transfer to their institution.

## **PROGRAM ENTRANCE REQUIREMENTS:**

The student should have average to above average ability in reasoning and reading comprehension. Students should be proficient in basic communications and basic math. Discretion, judgment, and ethical behaviors are also important. In addition to accounting skill competence, employers seek accountants who have common sense, sound judgement, ambition, dependability, initiative, poise and talent.

Revised: 2/13/2018

Implementation: Fall 2018



# RCTC PROGRAM PLAN

## ACCOUNTING TRANSFER PATHWAY

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....30 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: COMMUNICATION .....11 CR

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

#### GOAL 3: NATURAL SCIENCES .....3 CR

MnTC Goal 3 course with a laboratory

#### GOAL 4: MATHEMATICAL/LOGICAL REASONING.....3 CR

MATH 1115, College Algebra, 3 cr **OR**

Any course for which MATH 1115 is a prerequisite

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....8 CR

ECON 2214, Principles of Microeconomics, 4 cr

ECON 2215, Principles of Macroeconomics, 4 cr

#### GOAL 6: THE HUMANITIES AND FINE ARTS.....3 CR

Credits from MnTC Goal 6

#### MNTC ELECTIVES .....0-2 CR

Select a minimum of 2 additional MnTC credits from Goal 3, 5, 6 or 9

### II. PROGRAM CORE REQUIREMENTS.....30 CREDITS

ACCT 1814, Payroll Accounting, 3 cr

ACCT 2217, Financial Accounting, 4 cr

ACCT 2218, Managerial Accounting, 4 cr

ACCT 2234, Computerized Accounting and Business Applications, 3 cr.

ACCT 2237, Accounting and Business Information Technology, 3 cr

BUS 2201, Principles of Marketing, 3 cr

BUS 2210, Legal Environment of Business, 3 cr

BUS 2212, Business & Economics Statistics, 4 cr

BUS 2232, Principles of Management, 3 cr

#### TOTAL.....60 CREDITS

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Accounting Transfer Pathway program at RCTC, students will achieve the following outcomes:

- **Strategic Thinking:** Recognize accounting, economic, marketing and business opportunities/challenges and develop strategies to address them.
- **Data Informed Decision Making:** Apply critical thinking skills and technology to formulate viable solutions to organizational issues.
- **Global Perspective:** Identify domestic, international, cultural, political, and economic issues present in today's work environment.
- **Ethical & Social Responsibility:** Translate ethical and social responsibility concepts into responsible decision-making in a business environment.
- **Organizational Dynamics:** Identify and analyze factors that influence organizational dynamics including teamwork, leadership, communication, and interpersonal skills.
- Record, analyze, interpret, and report financial transactions using Generally Accepted Accounting Principles (GAAP) and other professional accounting standards and laws.
- Develop and use critical thinking processes to compare detailed expected results to actual reported information.
- Utilize technology including accounting software, spreadsheets, databases, and other accounting information software when reporting financial information.
- Analyze, interpret, and report financial data and non-financial information to aid decision-makers within an organization.
- Use clear and concise oral and written communication methods to convey financial and non-financial information effectively to different users.

## **ADDITIONAL INFORMATION:**

The Accounting Transfer Pathway AS offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated Accounting bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities\* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

\*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

Revised: 10/12/2021

Implementation: Fall 2022

# RCTC PROGRAM PLAN

## ADMINISTRATIVE OFFICE PROFESSIONAL

Diploma

<b>I. MINNESOTA TRANSFER CURRICULUM (MnTC)/</b>	
<b>GENERAL EDUCATION REQUIREMENTS.....</b>	<b>3 CREDITS</b>
ENGL 1109, Introduction to Professional and Technical Communication, 3 cr (MnTC Goal 1)	
ENGL 1630, English Grammar for Careers, 3 cr	
ENGL 1117, Reading and Writing Critically I, 4 cr (MnTC Goal 1)	
<b>II. PROGRAM CORE REQUIREMENTS.....</b>	<b>25 CREDITS</b>
AOP 1101, Microsoft Windows and Office Fundamentals, 3 cr	
AOP 1030, Keyboarding II, 3 cr	
AOP 1320, Microsoft Word, 3 cr	
AOP 1360, Microsoft Excel, 3 cr	
AOP 2614, Customer Relations Management, 3 cr	
AOP 2617, Microsoft Outlook and Meeting Planning, 3 cr	
AOP 2220, Business Communications, 3 cr	
AOP 2622, Multimedia and Collaborative Technology, 3 cr	
AOP 2870, Employment Strategies, 1 cr	
<b>III. ELECTIVES.....</b>	<b>3 CREDITS</b>
<b>TOTAL .....</b>	<b>31 CREDITS</b>

### **PROGRAM OUTCOMES:**

Upon completion of the Administrative Office Professional at RCTC, students will achieve the following outcomes:

- Key at a speed rate of 45 GWPM with minimal errors.
- Exhibit professionalism and effective customer relations skills in writing and verbal communication with all stakeholder.
- Identify, analyze, and resolve current workplace issues and future needs by utilizing critical thinking skills, current software applications, and emerging technology.
- Create, format, and proofread business documents using correct business English.

### **ADDITIONAL NOTES:**

**PURPOSE:** This program will prepare students for employment as Administrative Office Professionals. Students will develop technology and critical thinking skills crucial to ensuring organization success. They will learn to provide critical support to organization leaders such as administrators, executives, and managers by keeping current on the 3 T's: Terminology, Trends, and Technology. Students in this program will be trained to manage multiple calendars and schedules, provide professional service to all internal and external stakeholders, and research innovative and emerging technologies to maintain an efficient office environment.

# RCTC PROGRAM PLAN

## **PROGRAM ENTRANCE REQUIREMENTS:**

Students entering this program must be proficient in keyboarding skills at a minimum of 35 gross words per minute (GWPM). Students not meeting this requirement should enroll in AOP1020 Keyboarding I as an elective course. Your wpm will be assessed within the first week of enrollment in AOP 1030, Keyboarding II.

Revised: 10/10/2023

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## ADVANCED HOSPITAL NURSING ASSISTANT

Certificate

*Program approved by State of Minnesota Department of Health*

### I. PROGRAM CORE REQUIREMENTS..... 16-17 CREDITS

HCOP 1610, Medical Terminology: Body Systems and Diseases, 2 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

HLTH 1110, CPR for the Health Care Professional, 1 cr

NA 1500, Nursing Assistant Theory and Clinical, 4 cr

(Approved State of Minnesota Department of Health Curriculum)

NA 1602, Hospital Nursing Assistant, 2 cr

PSYC 1611, Psychology of Adjustment, 3 cr **OR** PSYC 2618, General Psychology, 4 cr

**TOTAL .....16-17 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Advanced Hospital Nursing Assistant program at RCTC, students will achieve the following outcomes:

- Demonstrate the infection control practices of standard precautions and isolation procedures.
- Perform personal care and technical care skills within the NA scope of practice and within safe standards of care.
- Demonstrate effective communication skills related to patient care.
- Demonstrate confidentiality and knowledge of HIPAA regulations.

### **ADDITIONAL NOTES:**

**PURPOSE:** The Nursing Assistant curriculum is designed to prepare students for careers in health care under the supervision of the licensed nurse. The student will learn the basic entry-level nursing skills to work in health care. A Nursing Assistant may be involved in direct patient/resident care or assist with care of the patient/resident unit and/or equipment, charting, record keeping and home-health services. This advanced certificate is designed for the student interested in a fast paced, acute care, hospital environment.

The Nursing Assistant Theory and Clinical may provide a career ladder. Successful completion of Nursing Assistant Theory and Clinical curriculum is a required component of Advanced Hospital Nursing Assistant, Human Services Technician, Practical Nurse, Associate Degree Nursing and Surgical Technology programs.

# RCTC PROGRAM PLAN

## **PROGRAM ENTRANCE REQUIREMENTS:**

- 1) ENGL 1117: College level reading and writing skills; appropriate placement skills. Please contact the Welcome Center at (507) 285-7557 for information on Academic Skills Assessments.
- 2) PSYC 1611/PSYC 2618: College level reading and writing skills.
- 3) HCOP 1610: D2L online tutorial if taking online course.
- 4) NA 1500: Successful completion or concurrent enrollment in ENGL 1117, PSYC 1611, HCOP 1610.
- 3) NA 1602: NA 1500 or equivalent college course.\*

\*ALL STUDENTS taking NA 1602 are required to take a National Criminal Background check at a cost of \$55 during the first week of class. This fee is not included in your tuition. You will need to pay for it by credit card, debit card, or cashier's check.

This program of study may be completed in one (1) semester. Classes may be taken on campus with some course options offered online.

## **Additional Nursing Assistant Optional Components:**

### **Long-Term Care Nursing Assistant/Home-Health Aide\*\***

NA 1500, Nursing Assistant Theory and Clinical, 4 cr

NA 1501, Home-Health Aide Theory, 1 cr

\*\*Students who successfully complete the Long Term Care Nursing Assistant Theory & Clinical (NA 1500) are eligible to take the State Nursing Assistant Competency Examination. If a student also completes the Home-Health Aide Theory (NA 1501) with the necessary skills and information, they are eligible to take the combined State Nursing Assistant/Home-Health Aide Competency Examination.

**Any student completing the sixteen credit Advanced Hospital Nursing Assistant Certificate is eligible to apply for graduation. Graduation applications are available online or at Admissions and Records.**

## **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Students in the program will also be required to complete a National Criminal background Study. Information about completing the background study will be available from program faculty.

Revised: 03/12/2018

Implementation: Fall 2018

# RCTC PROGRAM PLAN

## ALCOHOL AND DRUG COUNSELING

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....34 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

#### GOAL 3: NATURAL SCIENCES .....4 CR

BIOL 1110, Human Biology, 4 cr

#### GOAL 4: MATHEMATICS/SYMBOLIC SYSTEMS .....4 CR

MATH 1090, Statway Statistics II, 4 cr **OR**

MATH 2208, Fundamentals of Statistics, 4 cr

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....10 CR

PSYC 2618, General Psychology, 4 cr

PSYC 2626, Human Growth and Development, 3 cr

SOC 1614, Introduction to Sociology, 3 cr

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR

Credits from MnTC Goal 6

#### GOAL 7: HUMAN DIVERSITY.....3 CR

COMM 1130, Interpersonal Communication, 3 cr

#### ANY OTHER MnTC GOAL.....3 CR

Three credits from MnTC Goal 8, 9 or 10

### II. PROGRAM CORE REQUIREMENTS.....22 CREDITS

HS 1710, Foundations of Alcohol and Drug Counseling, 3 cr

HS 1720, Co-Occurring Disorders, 3 cr

HS 1730, Screening and Assessment of Disorders, 2 cr

HS 1740, Pharmacology of Addiction, 2 cr

HS 1750, Case Management and Ethics, 3 cr

HS 1760, Multicultural Aspects of Addiction, 3 cr

HS 1770, Alcohol and Drug Counseling Practicum I\*, 3 cr

HS 1780, Alcohol and Drug Counseling Practicum II\*, 3 cr

### III. PROGRAM CORE REQUIREMENTS.....4 CREDITS

**Choose a total of 4 credits from the following courses:**

# RCTC PROGRAM PLAN

HS 1765, Counseling Theory and Practice, 3 cr  
 HS 1781, Crisis Intervention and Prevention, 3 cr  
 HS 1782, Addiction, Society and the Justice System, 1 cr  
 HS 1783, At-Risk Children, Youth and their Families, 3 cr  
 HS 1785, Overview of Applied Behavioral Analysis, 1 cr

**TOTAL.....60 CREDITS**

## **PROGRAM OUTCOMES:**

Upon completion of the Alcohol and Drug Counseling program at RCTC, students will achieve the following outcomes:

- Analyze ecological aspects of addiction.
- Evaluate psychopharmacological features of addiction.
- Recognize ethical and legal issues influencing counseling practice.
- Exhibit professional standards of counseling practice.
- Examine how diversity influences case conception.
- Recognize co-occurring conditions that influence case conception.
- Examine intake, screening, and orientation protocol.
- Prepare a comprehensive chemical dependency assessment.
- Create case notes, treatment, and prevention plans.
- Demonstrate counseling interventions, skills, and theory.
- Examine case management philosophy and tools.
- Explain crisis intervention and prevention strategies.
- Design and deliver psychoeducational curriculum.
- Recognize the need to coordinate services through referral.
- Report and consult with other professionals.

## **ADDITIONAL NOTES:**

**PURPOSE:** The Alcohol and Drug Counseling Associate Degree prepares graduates for licensure with the Minnesota Board of Behavioral Health and Therapy (MNBBHT) as a Temporary Alcohol and Drug Counselor (ADC- T). The Alcohol and Drug Counseling Associate Degree is designed for students who have a high school diploma, want to learn more about chemical dependency issues, want to work as an ADC-T, and who want to complete a bachelor's degree at a university within the next 5 years. While in this program, students gain valuable classroom knowledge in 12 core areas of addiction counseling theory, practice, and skill development. Through the required practicum placements in a licensed chemical dependency facility student's gain valuable and necessary practical experience under the supervision of a Licensed Alcohol & Drug Counselor or other qualified professional.

The Alcohol and Drug Counseling Associate Degree does not license a student as a temporary alcohol and drug counselor. However, students who complete the Alcohol and Drug Counseling Associate Degree can apply for licensure as a temporary drug counselor (ADC-T) through the Minnesota Board of Behavioral Health & Therapy. If the licensing board approves your application



# RCTC PROGRAM PLAN

as a temporary drug counselor, students can work as a temporary drug counselor for roughly 6 years (or 5 annual renewal periods) while they complete a bachelor's degree.

## **ALCOHOL & DRUG COUNSELING CERTIFICATE ADMISSION CRITERIA:**

Currently all but two of the Human Service (HS) Alcohol and Drug Counseling (ADC) classes are open to any enrolled RCTC students. The two HS ADC classes that are not open to all RCTC students are the clinical practicums (HS 1770: Alcohol and Drug Counseling Practicum I & HS 1780: Alcohol and Drug Counseling Practicum II). Students interested in accessing the clinical practicums must pass a background study, get instructor permission, declare alcohol and drug counseling as a major, and have all class pre-requisites met.

## **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offences is available at:

<https://www.revisor.mn.gov/statutes?id=245C.15>. Information about completing the background study will be available from program faculty.

\*Must complete the Criminal Background study required by the Minnesota Department of Human Services and qualify for direct client contact prior to enrollment in HS 1770 and HS 1780.

Revised: 05/11/2021

Implementation: Fall 2021

# RCTC PROGRAM PLAN

## ALCOHOL AND DRUG COUNSELING

Certificate

### I. PROGRAM CORE REQUIREMENTS.....22 CREDITS

- HS 1710, Foundations of Alcohol and Drug Counseling, 3 cr
- HS 1720, Co-Occurring Disorders, 3 cr
- HS 1730, Screening and Assessment of Disorders, 2 cr
- HS 1740, Pharmacology of Addiction, 2 cr
- HS 1750, Case Management and Ethics, 3 cr
- HS 1760, Multicultural Aspects of Addiction, 3 cr
- HS 1770, Alcohol and Drug Counseling Practicum I\*, 3 cr
- HS 1780, Alcohol and Drug Counseling Practicum II\*, 3 cr

### II. PROGRAM CORE ELECTIVE REQUIREMENTS.....4 CREDITS

Choose a total of 4 credits from the following courses:

- HS 1765, Counseling Theory and Practice, 3 cr
- HS 1781, Crisis Intervention and Prevention, 3 cr
- HS 1782, Addiction, Society, and the Justice System, 1 cr
- HS 1783, At-Risk Children, Youth and their Families, 3 cr
- HS 1785, Overview of Applied Behavioral Analysis, 1 cr

**TOTAL.....26 CREDITS**

### PROGRAM OUTCOMES:

Upon completion of the Alcohol and Drug Counseling program at RCTC, students will achieve the following outcomes:

- Analyze ecological aspects of addiction.
- Evaluate psychopharmacological features of addiction.
- Recognize ethical and legal issues influencing counseling practice.
- Exhibit professional standards of counseling practice.
- Examine how diversity influences case conception.
- Recognize co-occurring conditions that influence case conception.
- Examine intake, screening, and orientation protocol.
- Prepare a comprehensive chemical dependency assessment.
- Create case notes, treatment, and prevention plans.
- Demonstrate counseling interventions, skills, and theory.
- Examine case management philosophy and tools.
- Explain crisis intervention and prevention strategies.
- Design and deliver psychoeducational curriculum.
- Recognize the need to coordinate services through referral.
- Report and consult with other professionals.

# RCTC PROGRAM PLAN

## **ADDITIONAL NOTES:**

**PURPOSE:** The Alcohol and Drug Counseling Certificate prepares graduates for licensure with the Minnesota Board of Behavioral Health & Therapy (MNBBHT) as a Temporary Alcohol and Drug Counselor (ADC-T) or Licensed Alcohol and Drug counselors (LADC). The Alcohol and Drug Counseling Certificate is designed for students who have an associate degree (or higher), want to learn more about chemical dependency issues, and who desire a career working with chemically dependent people. Students in this program, will gain valuable classroom knowledge in 12 core areas of addiction counseling theory, practice, and skill development. Through the required practicum placements in a licensed chemical dependency facility student's gain valuable and necessary practical experience under the supervision of a Licensed Alcohol & Drug Counselor or other qualified professional.

The Alcohol and Drug Counseling Certificate does not license a student as an alcohol and drug counselor. However, students who complete the Alcohol and Drug Counseling Certificate and have already completed an associate degree can apply for licensure as a temporary drug counselor (ADC-T) through the Minnesota Board of Behavioral Health Therapy (MNBBHT). If the licensing board approves your application as a temporary drug counselor, students can work as a temporary drug counselor for roughly 6 years (or 5 annual renewal periods) while they complete a bachelor's degree. Students who complete the Alcohol and Drug Counseling Certificate and hold a bachelor's degree (or higher) and pass the national exam can apply for a drug counseling license (LADC) through the licensing board (MNBBHT).

## **ALCOHOL & DRUG COUNSELING CERTIFICATE ADMISSION CRITERIA:**

Currently all but two of the Human Service (HS) Alcohol and Drug Counseling (ADC) classes are open to any enrolled RCTC students. The two HS ADC classes that are not open to all RCTC students are the clinical practicums (HS 1770: Alcohol and Drug Counseling Practicum I & HS 1780: Alcohol and Drug Counseling Practicum II). Students interested in accessing the clinical practicums must pass a background study, get instructor permission, declare alcohol and drug counseling as a major, and have all class pre-requisites met.

\*The Alcohol and Drug Counseling Certificate should only be declared by students who have already completed an associate degree (or higher) from a college or university.

\*Must complete the Criminal Background study required by the Minnesota Department of Human Services and qualify for direct client contact prior to enrollment in HS 1770 and HS 1780.

## **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offences is available at:

<https://www.revisor.mn.gov/statutes/cite/245C.15>. Information about completing the background study will be available from program faculty.

Revised: 05/11/2021

Implementation: Fall 2021

# RCTC PROGRAM PLAN

## ART TRANSFER PATHWAY

Associate of Fine Arts

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### **GENERAL EDUCATION REQUIREMENTS..... 50 CREDITS**

*Complete at least 24 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of ten goal areas.*

#### **GOAL 1: COMMUNICATION .....11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

#### **GOAL 3: NATURAL SCIENCES .....3 CR**

Credits from MnTC Goal 3

#### **GOAL 4: MATHEMATICAL/LOGICAL REASONING.....3 CR**

Credits from MnTC Goal 4

#### **GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

Credits from MnTC Goal 5

#### **GOAL 6: THE HUMANITIES AND FINE ARTS .....27 CR**

Program Core Requirements:

ART 1111, Art History Survey I, 3 cr

ART 1121, 2D Design, 3 cr

ART 1123, 3D Design, 3 cr

ART 1130, Digital Art I, 3 cr

ART 1134, Drawing I, 3 cr

**Complete these 12 credits:**

ART 1124, Graphic Design I, 3 cr

ART 1144, Painting I, 3 cr

ART 1164, Ceramics I, 3 cr

ART 1184, Photography I, 3 cr

#### **GOAL 8: GLOBAL PERSPECTIVE.....3 CR**

ART 1112, Art History Survey II, 3 cr

### II. STUDIO ELECTIVES..... 6 CREDITS

**Choose a minimum of 6 credits of ART courses:**

ART 1010, Introduction to Art, 3 cr

ART 1120, Computer as Creative Media, 3 cr

# RCTC PROGRAM PLAN

ART 1212, Figure Drawing, 3 cr  
 ART 1223, Typography, 3 cr  
 ART 1232, Web Design I, 3 cr  
 ART 1233, Web Design II, 3 cr  
 ART 1290, Media Arts, 3 cr  
 ART 1337 Art and Code, 3 cr  
 ART 2224, Graphic Design II, 3 cr  
 ART 2230, Digital Art II, 3 cr  
 ART 2234, Drawing II, 3 cr  
 ART 2240, Motion Graphics I, 3 cr  
 ART 2244, Painting II, 3 cr  
 ART 2264, Ceramics II, 3 cr  
 ART 2280, Photography II, 3 cr  
 ART 2281, Professional Portfolio, 3 cr  
 ART 2286, Photo Lighting Techniques, 3 cr

**III. ELECTIVES.....4 CREDITS**  
 Any course numbered above 1000 as needed to achieve a total of 60 credits.

**TOTAL ..... 60 CREDITS**

## **PROGRAM OUTCOMES:**

Upon completion of the Art Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Demonstrate an increased understanding of the vital role of the fine arts in an historic and social context.
- Articulate an informed personal reaction to artwork through critique.
- Demonstrate a knowledge of the elements of art and the principles of design in works of art.
- Identify and effectively use art-making materials with media specific techniques and safety considerations related to those media.
- Demonstrate basic proficiency with digital imaging software.
- Create original works of art that demonstrate a visual vocabulary, that explore conceptual frameworks, and exhibit an ability to make effective aesthetic judgements.
- Analyze formal concerns and composition strategies in two and three-dimensional design.

## **ADDITIONAL NOTES:**

The Art Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated Art bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities\* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

# RCTC PROGRAM PLAN

\*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

This transfer pathway degree will transfer to the following designated baccalaureate degree majors:

Bemidji State University  
Art, New Studio Practice BFA

Metropolitan State University  
Studio Arts, BA

Minnesota State University, Mankato  
Art, BA  
Art, BFA

Minnesota State University, Moorhead  
No receiving program

Southwest Minnesota State University  
Art: Studio Emphasis, BA

St. Cloud State University  
Art, BFA  
Art (AFA Completer), BFA

Winona State University  
Art: Studio Art, BA

02/20/2024

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## AUTOMOTIVE TECHNICIAN

Diploma

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....6 CREDITS**

COMM 1000, Introduction to Workplace Communication, 3 cr

MATH 1015, Applied Technical Math, 3 cr

### II. PROGRAM CORE REQUIREMENTS.....61 CREDITS

AMT 1720, Electrical Theory, 4 cr

AMT 1725, Electrical Lab, 4 cr

AMT 1730, Brakes Theory, 4 cr

AMT 1735, Brakes Lab, 5 cr

AMT 1810, Engine Repair Theory, 3 cr

AMT 1815, Engine Repair Lab, 7 cr

AMT 1820, Alignment and Suspension Theory, 2 cr

AMT 1825, Alignment and Suspension Lab, 3 cr

AMT 1900, Welding, 2 cr

AMT 2740, Drive Train Theory, 3 cr

AMT 2742, Manual Drive Train Lab, 4 cr

AMT 2744, Automatic Transmission/Transaxle Lab, 4 cr

AMT 2650, Automotive Science, 2 cr

AMT 2750, Engine Performance Theory, 4 cr

AMT 2752, Engine Performance Lab, 7 cr

AMT 2770, Heating and Air Conditioning, 3 cr

**TOTAL .....67 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Automotive Technician program at RCTC, students will achieve the following outcomes:

- Diagnose and repair engines.
- Diagnose, maintain and repair automatic transmission and transaxle.
- Diagnose and repair manual drive train and axles.
- Diagnose and repair suspension and steering.
- Diagnose and repair brake systems.
- Diagnose and repair electrical electronic systems.
- Diagnose and repair heating, ventilation, and air conditioning systems.
- Diagnose and repair engine performance.

**NOTE:** The program's goal is to prepare students for the Automotive Service Excellence (ASE) certification test.

Revised: 05/01/2023

Implementation: Fall 2023

# RCTC PROGRAM PLAN

## AVIATION PILOT

Associate of Applied Science

<b>I. MINNESOTA TRANSFER CURRICULUM (MnTC)/</b>	
<b>GENERAL EDUCATION REQUIREMENTS.....</b>	<b>16 CREDITS</b>
<b>GOAL 1: COMMUNICATION .....</b>	<b>7 CR</b>
ENGL 1117, Reading and Writing Critically I, 4 cr	
COMM 1114, Fundamentals of Public Speaking, 3 cr	
<b>GOAL 3: NATURAL SCIENCES .....</b>	<b>3 CR</b>
PHYS 1101, Elements of Physics, 3 cr	
<b>GOAL 4: MATHEMATICS/LOGICAL REASONING .....</b>	<b>3 CR</b>
MATH 1115, College Algebra, 3 cr <u>OR</u>	
MATH 1117, Precalculus, 4 cr, <u>OR</u>	
MATH 1127, Calculus I, 5 cr, <u>OR</u>	
MATH 1128, Calculus II, 5 cr	
<b>GOAL 6: HUMANITIES and FINE ARTS .....</b>	<b>3 CR</b>
PHIL 2130, Business Ethics, 3 cr	
<b>II. PROGRAM CORE REQUIREMENTS.....</b>	<b>44 CREDITS</b>
AVIA 1100, World of Aviation, 3 cr	
AVIA 1200, Private Pilot Ground, 3 cr	
AVIA 1210, Private Pilot Lab, 1 cr	
AVIA 1211, Private Pilot Lab II, 2 cr	
AVIA 1300, Aviation Weather, 3 cr	
AVIA 1310, Instrument Ground, 3 cr	
AVIA 1320, Instrument Pilot Flight Lab, 2 cr	
AVIA 1321, Instrument Pilot Flight Lab II, 1 cr	
AVIA 2100, Air Navigation 3 cr	
AVIA 2110, Aviation Safety, 3 cr	
AVIA 2115, Theory of Flight, 3 cr	
AVIA 2200, Commercial Pilot Ground, 3 cr	
AVIA 2250, Commercial Pilot Flight Lab, 2 cr	
AVIA 2251, Commercial Pilot Flight Lab II, 2 cr	
AVIA 2253, Multi-Engine Flight Lab, 2 cr	
AVIA 2350, Advanced Aircraft Systems, 3 cr	
AVIA 2450, Aviation Human Factors, 3 cr	
AVIA 2600, Flight Instructor Ground, 2 cr	
<b>TOTAL.....</b>	<b>60 CREDITS</b>



# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Aviation Pilot program at RCTC, students will achieve the following outcomes:

- Analyze and interpret data and apply pertinent knowledge in decision making
- Make professional and ethical decisions.
- Communicate effectively, using both written and oral communication skills.
- Describe the professional attributes, requirements or certifications, and planning applicable to aviation careers.
- Discuss the impact of meteorology and environmental issues on aviation operations.
- Describe the principles of aircraft design, performance and operating characteristics.
- Evaluate aviation safety and the impact of human factors on safety.
- Discuss the impact of national and international aviation law, regulations and labor issues on aviation operations.
- Explain the integration of airports, airspace, and air traffic control in managing the National Airspace System.
- Operate an aircraft in simulated instrument conditions to federal standards.
- Determine factors impacting aircraft performance, including engine power output, weight and balance, airport requirements, and flight maneuvers.
- Maintain compliance with procedures and practices contained in the Federal Aviation Regulations (FAR's), Aeronautical Information Manual (AIM), and other applicable FAA publications.
- Obtain the Federal Aviation Administration (FAA) certification as a Private Pilot, Airplane Single-Engine Land.
- Obtain the Federal Aviation Administration (FAA) certification as a Commercial Pilot, Airplane Single and Multi-Engine Land with an Instrument Rating.
- Obtain the Federal Aviation Administration (FAA) certification as a Certificated Flight Instructor, Airplane Single-Engine Land.

## **ADDITIONAL NOTES:**

**PURPOSE:** The two-year Associate of Applied Science (AAS) in Aviation Pilot degree program is designed to educate students who plan a career as a pilot in commercial aviation. The program is designed to prepare students with the technical knowledge and skills required for the Federal Aviation Administration (FAA) written and practical examinations for private, instrument, commercial, multi-engine, and flight instructor certificates. Students that complete the AAS in Aviation Pilot will obtain their commercial pilot certificate with an instrument rating in both single and multi-engine aircraft and a flight instructor certificate in single-engine aircraft.

Completion of this program is a path to becoming an Airline Transport Pilot (ATP). Graduates of this program are eligible for a Restricted ATP certificate at 1,250 flight hours. Those interested in continuing their aviation education can choose to transfer to Minnesota State University, Mankato for the completion of a Bachelor of Science in Aviation degree.

Revised: 2/14/2024

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## BIOINFORMATICS FOUNDATIONS

Associate of Science

<b>I. MINNESOTA TRANSFER CURRICULUM (MnTC)/</b>	
<b>GENERAL EDUCATION REQUIREMENTS.....</b>	<b>40 CREDITS</b>
<i>Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.</i>	
<b>GOAL 1: WRITTEN AND ORAL COMMUNICATION .....</b>	<b>11 CR</b>
COMM 1114, Fundamentals of Public Speaking, 3 cr	
ENGL 1117, Reading and Writing Critically I, 4 cr	
ENGL 1118, Reading and Writing Critically II, 4 cr	
<b>GOAL 3: NATURAL SCIENCES .....</b>	<b>12 CR</b>
BIOL 1220, General Biology I, 4 cr	
BIOL 2300, Genetics, 4 cr	
CHEM 1127, Chemical Principles I, 4 cr	
<b>GOAL 4: MATHEMATICS/LOGICAL REASONING.....</b>	<b>3 CR</b>
MATH 1119, Applied Calculus for Business Majors, 3 cr <b>OR</b>	
MATH 1127, Calculus I, 5 cr	
<b>GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....</b>	<b>6 CR</b>
Choose a minimum of two credits from two different areas from MnTC Goal 5	
<b>GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....</b>	<b>6 CR</b>
Choose a minimum of two credits from two different areas from MnTC Goal 6	
<b>MnTC ELECTIVES: .....</b>	<b>2 CR</b>
<b>II. PROGRAM CORE REQUIREMENTS.....</b>	<b>19 CREDITS</b>
COMP 1150, Computer Science Concepts, 3 cr	
COMP 2243, Programming & Problem Solving, 4 cr	
COMP 2247, Algorithms and Data Structure, 4 cr	
MATH 2218, Discrete Mathematics, 4 cr	
MATH 2350, Introduction to Mathematical Statistics, 4 cr	
<b>III. OPEN ELECTIVES.....</b>	<b>1 CREDIT</b>
Physical Education course recommended	
<b>TOTAL .....</b>	<b>60 CREDITS</b>

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Computer Science program at RCTC, students will achieve the following outcomes:

- Apply mathematical foundations, algorithmic principles, and computer science concepts to analyze and design software solutions.
- Design, implement and validate software using Java in conjunction with graphical user interface.
- Apply current design techniques including the effective application of data structures, recursion, and object-oriented technologies for software solutions.
- Evaluate the efficiency of software algorithm using Big O notation.
- Develop logical resonating and problem-solving skills.
- Work as part of a team to analyze, design and implement software solutions.

Revised: 11/13/2018

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## BIOLOGY TRANSFER PATHWAY

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### **GENERAL EDUCATION REQUIREMENTS.....31-35 CREDITS**

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas. Consult with an advisor to see which MATH course is required by your transfer institution.*

#### **GOAL 1: WRITTEN AND ORAL COMMUNICATION .....11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

#### **GOAL 3: NATURAL SCIENCES .....8 CR**

BIOL 1220, General Biology I, 4 cr (also meets Goal 10)

CHEM 1127, Chemical Principles I, 4 cr

#### **GOAL 4: MATHEMATICS/LOGICAL REASONING.....6-10 CR**

Select two courses from the list below.

MATH 1115, College Algebra, 3 cr

MATH 1117, Pre-calculus, 4 cr

MATH 1119, Applied Calculus, 3 cr

MATH 1127, Calculus I, 5 cr

MATH 1128, Calculus II, 4 cr

#### **GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

Credits from MnTC Goal 5

#### **GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

Credits from MnTC Goal 6

### II. PROGRAM REQUIREMENTS.....12 CREDITS

BIOL 1230, General Biology II, 4 cr

BIOL 2300, Genetics, 4 cr

CHEM 1128, Chemical Principles II, 4 cr

### III. RESTRICTED BIOLOGY ELECTIVES.....4 CREDITS

Select one course (4 credits) from the list below.

BIOL 2000, Ecology, 4 cr

BIOL 2021, Microbiology, 4 cr

### IV. UNRESTRICTED ELECTIVES.....9-13 CREDITS

*Consult with an advisor to determine course selections, which are appropriated for your transfer institution.*

**TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Biology Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Explain the scientific method and demonstrate the ability to apply all aspects of it during scientific investigation.
- Demonstrate an ability to understand and apply biological concepts and processes.
- Show proper use of instruments and techniques in the laboratory.
- Demonstrate an ability to work independently and collaboratively.
- Exhibit responsible behavior and engagement as a student in biology.

## **ADDITIONAL NOTES:**

**PURPOSE:** The Biology Transfer Pathway AS offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated Biology bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field. Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University, Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

This transfer pathway degree will transfer to the following designated baccalaureate degree majors:

At Bemidji State University:

Biology, BS  
Biology, BA

At Metropolitan State University:

Biology, BA

At Minnesota State University, Mankato:

Biology, BS

At Minnesota State University, Moorhead:

Biology, BA  
Ecology, BA

At Southwest Minnesota State University:

Biology, BA

At St. Cloud State University:

Biology, BA

At Winona State University:

Biology - Allied Health, BS  
Biology - Cell & Molecular, BS  
Biology - Ecology, BS  
Biology - Environmental Science, BS

Revised: 11/13/2018

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## BUSINESS ADMINISTRATION

Certificate

### I. PROGRAM CORE REQUIREMENTS.....21 CREDITS

- ACCT 2217, Financial Accounting, 4 cr
- ACCT 2218, Managerial Accounting, 4 cr
- BUS 1101, Introduction to Business, 3 cr
- BUS 2212, Business and Economic Statistics, 4 cr
- BUS 2232, Principles of Management, 3 cr
- ECON 1101, Introduction to Economics, 3 cr **OR**
- ECON 2214, Principles of Economics: Micro, 4 cr

**TOTAL .....21 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Business Administration certificate program at RCTC, students will achieve the following outcomes:

- Analyze and interpret financial data from a managerial perspective.
- Describe the major functional areas of business including management, marketing and finance.
- Calculate and interpret business applications of statistics.
- Identify the role of managers in organizations including planning, leading, quality management and managing people.
- Explain how business leaders apply economic principles that allocate resources efficiently, maximize profits, and anticipate responses to strategic planning.

Revised: 02/18/2009

Implementation: Fall 2009

# RCTC PROGRAM PLAN

## BUSINESS ANALYSIS

Certificate

### I. PROGRAM CORE REQUIREMENTS.....9 CREDITS

BUS 2317, Principles of Business Analysis I, 3 cr

BUS 2318, Principles of Business Analysis II, 3 cr

BUS 2319, Principles of Business Analysis III, 3 cr

### TOTAL .....9 CREDITS

### **PROGRAM OUTCOMES:**

Upon completion of the Business Analysis program at RCTC, students will achieve the following outcomes:

- Identify and clearly articulate the various stakeholder roles needed to collect project requirements.
- Utilize effective communication techniques based on various stakeholders.
- Demonstrate practical skills to analyze, document, and develop organizational and operational requirements that lead to functional processes.
- Apply various techniques used to manage project requirements.

### **ADDITIONAL NOTES:**

**PURPOSE:** The Business Analysis Certificate prepares students to analyze the organization and design of businesses, government departments and non-profit organizations. The business analyst's role is described as a liaison among stakeholders in order to understand the structure, policies and operations of an organization and to recommend solutions that enable the organization to achieve its goals. In the past, this position was often outsourced to consultants, but many companies now prefer to use in-house analysts who have in-depth knowledge of their specific industry.

**CAREER INFORMATION:** According to the Minnesota Department of Employment and Economic Development (DEED), future demand for business analysts is above average. In the Southeast region of Minnesota, employment in this occupation is projected to increase by 11 percent by 2016. In addition, national data released by the US Bureau of Labor Statistics has growth in this job area reaching 24 percent between 2008 and 2018.

Revised : 02/14/2012

Implementation: Fall 2012

# RCTC PROGRAM PLAN

## BUSINESS MANAGEMENT

Associate of Applied Science

<b>I. MINNESOTA TRANSFER CURRICULUM (MnTC)/</b>	
<b>GENERAL EDUCATION REQUIREMENTS.....</b>	<b>15 CREDITS</b>
<b>GOAL 1: WRITTEN AND ORAL COMMUNICATION .....</b>	<b>4 CR</b>
ENGL 1117, Reading and Writing Critically I, 4 cr	
<b>GOAL 3: NATURAL SCIENCES .....</b>	<b>3 CR</b>
MnTC Goal 3 course with a laboratory	
<b>OR</b>	
<b>GOAL 4: MATHEMATICS/LOGICAL REASONING.....</b>	<b>3 CR</b>
Mathematics must be MATH 1111 college level or above	
<b>GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....</b>	<b>3 CR</b>
ECON 1101, Introduction to Economics, 3 cr	
<b>GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....</b>	<b>3 CR</b>
Credits from MnTC Goal 6	
<b>ADDITIONAL GENERAL EDUCATION REQUIREMENTS.....</b>	<b>2 CR</b>
Students may choose additional elective credits from MnTC Goals 1-10 to meet the general education requirements.	
<b>II. PROGRAM CORE REQUIREMENTS.....</b>	<b>22 CREDITS</b>
ACCT 2217, Financial Accounting, 4 cr	
ACCT 2234, Computerized Accounting and Business Applications, 3 cr	
BUS 1101, Introduction to Business, 3 cr	
BUS 2101, Personal Finance, 3 cr	
BUS 2150, Global Business, 3 cr	
BUS 2232, Principles of Management, 3 cr	
BUS 2235, Organizational Dynamics, 3 cr	
<b>III. BUSINESS MANAGEMENT EMPHASIS.....</b>	<b>14 CREDITS</b>
ACCT 2218, Managerial Accounting, 4 cr	
BUS 2201, Principles of Marketing, 3 cr	
BUS 2210, Legal Environment of Business, 3 cr	
BUS 2240, Project Management, 3 cr	
BUS 2290, Current Topics in Business, 1 cr	
<b>IV. BUSINESS ELECTIVES.....</b>	<b>9 CREDITS</b>
<b>(Select any ACCT, BUS, ECON courses)</b>	
<b>TOTAL .....</b>	<b>60 CREDITS</b>



# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Business Management AAS program at RCTC, students will achieve the following outcomes:

- **Strategic Thinking:** Recognize accounting, economic, marketing and business opportunities/challenges and develop strategies to address them.
- **Data Informed Decision Making:** Apply critical thinking skills and technology to formulate viable solutions to organizational issues.
- **Global Perspective:** Identify domestic, international, cultural, political, and economic issues present in today's work environment.
- **Ethical & Social Responsibility:** Translate ethical and social responsibility concepts into responsible decision-making in a business environment.
- **Organizational Dynamics:** Identify and analyze factors that influence organizational dynamics including teamwork, leadership, communication, and interpersonal skills.
- Identify the role of managers in organizations including planning, leading, quality management and managing people.
- Interpret the American legal system through case law, business law decisions, and processes; describe impact on business environment.
- Summarize and apply steps in the project management process.
- Analyze and interpret financial data from a managerial perspective.
- Apply fundamental concepts of personal financial management.

## **ADDITIONAL NOTES:**

**PURPOSE:** The Business Management program is designed to provide an overview of the practical and theoretical knowledge needed to help manage organizations. The program is designed to provide opportunities for students to implement and test the skills they learn.

Revised: 10/12/2021

Implementation: Fall 2021

# RCTC PROGRAM PLAN

## BUSINESS MANAGEMENT

Certificate

### I. PROGRAM CORE REQUIREMENTS.....13 CREDITS

ACCT 2217, Financial Accounting, 4 cr

BUS 1101, Introduction to Business, 3 cr

BUS 2202, Consumer Promotions & Digital Marketing, 3 cr **OR**

BUS 2508, Sales Management & Analytics, 3 cr

BUS 2232, Principles of Management, 3 cr

**TOTAL .....13 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Business Management certificate program at RCTC, students will achieve the following outcomes:

- Identify the role of managers in organizations including planning, leading, quality management and managing people.
- Record, analyze, interpret, and report financial transactions using Generally Accepted Accounting Principles (GAAP) and other professional accounting standards and laws.
- Describe the major functional areas of business including management, marketing and finance.
- Recognize the various perspectives on consumer and organizational buying behavior as a means for better meeting the wants and need of target customers.

Revised: 02/13/2018

Implementation: Fall 2018

# RCTC PROGRAM PLAN

## BUSINESS MANAGEMENT - HOSPITALITY

Associate of Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)

**GENERAL EDUCATION REQUIREMENTS.....15 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....4 CR**

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 3: NATURAL SCIENCES .....3 CR**

MnTC Goal 3 course with a laboratory

**OR**

**GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 CR**

Mathematics must be MATH 1111 college level or above

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

ECON 1101, Introduction to Economics, 3 cr

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

Credits from MnTC Goal 6

**ADDITIONAL GENERAL EDUCATION REQUIREMENTS.....2 CR**

Students may choose additional elective credits from MnTC Goals 1-10 to meet the general education requirements.

### II. PROGRAM CORE REQUIREMENTS.....22 CREDITS

ACCT 2217, Financial Accounting, 4 cr

ACCT 2234, Computerized Accounting and Business Applications, 3 cr

BUS 1101, Introduction to Business, 3 cr

BUS 2101, Personal Finance, 3 cr

BUS 2150, Global Business, 3 cr

BUS 2232, Principles of Management, 3 cr

BUS 2235, Organizational Dynamics, 3 cr

### III. HOSPITALITY MANAGEMENT EMPHASIS.....23 CREDITS

ACCT 2218, Managerial Accounting, 4 cr

BUS 2201, Principles of Marketing, 3 cr

BUS 2210, Legal Environment of Business, 3 cr

BUS 2240, Project Management, 3 cr

BUS 2290, Current Topics in Business, 1 cr

BUS 2507, Operations and Guest Service Management, 3 cr

BUS 2508, Sales Management & Analytics, 3 cr

BUS 2509, Hospitality Revenue Generation Strategies, 3 cr

**TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Business Management - Hospitality program at RCTC, students will achieve the following outcomes:

- **Strategic Thinking:** Recognize accounting, economic, marketing and business opportunities/challenges and develop strategies to address them.
- **Data Informed Decision Making:** Apply critical thinking skills and technology to formulate viable solutions to organizational issues.
- **Global Perspective:** Identify domestic, international, cultural, political, and economic issues present in today's work environment.
- **Ethical & Social Responsibility:** Translate ethical and social responsibility concepts into responsible decision-making in a business environment.
- **Organizational Dynamics:** Identify and analyze factors that influence organizational dynamics including teamwork, leadership, communication, and interpersonal skills.
- Demonstrate successful management concepts and practices in hospitality.
- Demonstrate ability to manage and coordinate staff and operations in various hotel departments.
- Demonstrate effective customer service strategies through interactions with guest and vendors, and extend these principles to interactions with superiors, subordinates, and peers.
- Describe the interrelated nature of Hospitality Travel, Entertainment, Recreation, and Tourism.
- Demonstrate problem solving skills and integrate new ways of thinking and learning.
- Explain the current digital landscape in the hospitality industry and role of social media and its direct and indirect influence upon the customer.

## **ADDITIONAL NOTES:**

**PURPOSE:** The Business Management program provides an overview of the practical and theoretical knowledge needed to help manage organizations. The program is designed to provide opportunities for students to implement and test the skills they learn. The program focuses on preparing careers in sales, management and marketing in the hospitality industry and is designed to provide opportunities for students to apply the skills they learn.

Revised: 02/11/2020

Implementation: Fall 2020

# RCTC PROGRAM PLAN

## BUSINESS MANAGEMENT - MARKETING

Associate of Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....15 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....4 CR**

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 3: NATURAL SCIENCES .....3 CR**

MnTC Goal 3 course with a laboratory

**OR**

**GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 CR**

Mathematics must be MATH 1111 college level or above

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

ECON 1101, Introduction to Economics, 3 cr

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

Credits from MnTC Goal 6

**ADDITIONAL GENERAL EDUCATION REQUIREMENTS.....2 CR**

Students may choose additional elective credits from MnTC Goals 1-10 to meet the general education requirements.

### II. PROGRAM CORE REQUIREMENTS.....22 CREDITS

ACCT 2217, Financial Accounting, 4 cr

ACCT 2234, Computerized Accounting and Business Applications, 3 cr

BUS 1101, Introduction to Business, 3 cr

BUS 2101, Personal Finance, 3 cr

BUS 2150, Global Business, 3 cr

BUS 2232, Principles of Management, 3 cr

BUS 2235, Organizational Dynamics, 3 cr

### III. MARKETING DIGITAL MANAGEMENT EMPHASIS.....16 CREDITS

BUS 2201, Principles of Marketing, 3 cr

BUS 2202, Consumer Promotions & Digital Marketing, 3 cr

BUS 2143, Social Media Management Strategies, 3 cr

BUS 2144, E-Business Management 3 cr

BUS 2508, Sales Management & Analytics 3 cr

BUS 2290, Current Topics in Business, 1 cr

### IV. BUSINESS ELECTIVES.....7 CREDITS

(Select any ACCT, BUS, ECON courses)

**TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Business Management – Marketing program at RCTC, students will achieve the following outcomes:

- **Strategic Thinking:** Recognize accounting, economic, marketing and business opportunities/challenges and develop strategies to address them.
- **Data Informed Decision Making:** Apply critical thinking skills and technology to formulate viable solutions to organizational issues.
- **Global Perspective:** Identify domestic, international, cultural, political, and economic issues present in today's work environment.
- **Ethical & Social Responsibility:** Translate ethical and social responsibility concepts into responsible decision-making in a business environment.
- **Organizational Dynamics:** Identify and analyze factors that influence organizational dynamics including teamwork, leadership, communication, and interpersonal skills.
- Apply marketing concepts, pricing, product development, consumer behavior, and distribution channels in designing an effective marketing plan.
- Demonstrate a working knowledge of business-to-business sales management and digital marketing.
- Identify key e-business concepts needed to create a new business or take an existing business online.
- Explain, analyze, and develop a cohesive consumer promotional plan and program implementation.
- Develop an organizational social media strategy plan.

## **ADDITIONAL NOTES:**

**PURPOSE:** The program is designed for students who wish to balance General Education with business-related courses. The program focuses on preparing for careers in sales, promotions, digital management and related fields.

Revised: 10/12/2021

Implementation: Fall 2021

# RCTC PROGRAM PLAN

## BUSINESS TRANSFER PATHWAY

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....30 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: COMMUNICATION .....11 CR

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

#### GOAL 3: NATURAL SCIENCES .....3 CR

MnTC Goal 3 course with a laboratory

#### GOAL 4: MATHEMATICAL/LOGICAL REASONING.....3 CR

MATH 1115, College Algebra, 3 cr **OR** Any course for which MATH 1115 is a prerequisite.

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....8 CR

ECON 2214, Principles of Microeconomics, 4 cr

ECON 2215, Principles of Macroeconomics, 4 cr

#### GOAL 6: THE HUMANITIES AND FINE ARTS.....3 CR

Credits from MnTC Goal 6

#### MnTC ELECTIVES.....0-2 CR

Select a minimum of 2 additional MnTC credits from Goal 3, 5, 6 or 9

### II. PROGRAM CORE REQUIREMENTS.....24 CREDITS

ACCT 2217, Financial Accounting, 4 cr

ACCT 2218, Managerial Accounting, 4 cr

ACCT 2234, Computerized Accounting and Business Applications, 3 cr

BUS 2201, Principles of Marketing, 3 cr

BUS 2210, Legal Environment of Business, 3 cr

BUS 2212, Business and Economic Statistics, 4 cr

BUS 2232, Principles of Management, 3 cr

### III. BUSINESS ELECTIVES.....6 CREDITS

#### Select two of the following courses:

BUS 1101, Introduction to Business, 3 cr

BUS 2101, Personal Finance, 3 cr

BUS 2144, E-Business Management, 3 cr

BUS 2150, Global Business, 3 cr

#### TOTAL .....60 CREDITS

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Business Transfer Pathway program at RCTC, students will achieve the following outcomes:

- **Strategic Thinking:** Recognize accounting, economic, marketing and business opportunities/challenges and develop strategies to address them.
- **Data Informed Decision Making:** Apply critical thinking skills and technology to formulate viable solutions to organizational issues.
- **Global Perspective:** Identify domestic, international, cultural, political, and economic issues present in today's work environment.
- **Ethical & Social Responsibility:** Translate ethical and social responsibility concepts into responsible decision-making in a business environment.
- **Organizational Dynamics:** Identify and analyze factors that influence organizational dynamics including teamwork, leadership, communication, and interpersonal skills.
- Understand how business leaders apply economic principles that allocate resources efficiently, maximize profits, and anticipate responses to strategic planning.
- Analyze and interpret financial data from a managerial perspective.
- Apply marketing concepts, pricing, product development, consumer behavior, and distribution channels in designing an effective marketing plan.
- Interpret the American legal system through case law, business law decisions, and processes; describe impact on business environment.
- Calculate and interpret business applications of statistics.

## **ADDITIONAL NOTES:**

**PURPOSE:** The Business Transfer Pathway AS offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated Business bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities\* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

\*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

This transfer pathway degree will transfer to the following designated baccalaureate degree majors:

Bemidji State University  
Business Administration, BS



# RCTC PROGRAM PLAN

Metropolitan State University

Management, BS  
 Business Administration, BS  
 Entrepreneurship and Innovation, BS  
 Human Resource Management, BS  
 Finance, BS  
 Marketing, BS  
 Supply Chain and Operations, BS  
 International Business, BS

Minnesota State University Moorhead

Business Administration, BS

Minnesota State University, Mankato

Management, BS - Business Management Emphasis, Human Resource Management Emphasis  
 Finance, BS - General Finance Emphasis, Investment Analysis Emphasis, Institutional Finance Emphasis, Financial Planning and Insurance Emphasis, Corporate Finance Emphasis  
 Marketing, BS  
 International Business, BS

Southwest Minnesota State University

Management, BS - General Management Concentration, Human Resource Management Concentration, Supply Chain Management Concentration

St. Cloud State University

Business Management, BS  
 Management, BS - Operations Management Concentration, Human Resources Concentration

Winona State University

Business Administration, BS

Revised: 10/12/2021

Implementation: Fall 2021

# RCTC PROGRAM PLAN

## COMPUTER AIDED DRAFTING TECHNOLOGY

Diploma

### I. PROFESSIONAL OR TECHNICAL CREDITS.....32 CREDITS

- CAD 1039, SolidWorks, 4 cr
- CAD 1149, Manufacturing Processes and Practices, 2 cr
- CAD 1225, Dimensioning and Tolerancing, 3 cr
- CAD 1226, Drafting Practices for Industry, 4 cr
- CAD 2500, CAD Software and Standards 2 cr
- CAD 1040, Technical Illustration, 2 cr
- CAD 1120, Sheetmetal and Weldments, 2 cr
- CAD 2258, Product and Machine Design, 4 cr
- CAD 2323, Advanced Dimensioning and Design, 4 cr
- CAD 2400, Reverse Engineering and Rapid Prototyping, 3 cr
- CAD 2460, Surfacing and Advanced Modeling, 2 cr

**TOTAL..... 32 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Computer Aided Drafting Technology program at RCTC, students will achieve the following outcomes:

- Demonstrate professional competence using CAD software (computer aided drafting).
- Think critically and creatively.
- Work productively and cooperatively with others.
- Complete detailed quality work up to industry and ANSI standards.

### **ADDITIONAL NOTES:**

**PURPOSE:** The one-year CAD technology program is designed to prepare students for a career using Computer Aided drafting tools and techniques. The focus of the curriculum is CAD software with an emphasis on SolidWorks and mechanical applications. Students follow drafting standards and learn basic concepts of design. Excellent employment opportunities exist, and graduates can advance into positions such as designers, inspectors, associate engineers, and CAD sales and software support.

Revised: 2/20/2024

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## CANCER REGISTRY MANAGEMENT

Associate of Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....17 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....10 CR**

ENGL 1109, Introduction to Professional and Technical Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

**GOAL 3: NATURAL SCIENCES .....4 CR**

BIOL 1107, Fundamentals of Anatomy and Physiology, 4 cr

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

PSYC 1611, Psychology of Adjustment, 3 cr

**OR**

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

PHIL 1135, Bioethics (**Recommended**), 3 cr

### II. PROGRAM CORE REQUIREMENTS.....43 CREDITS

AOP 2350, Microcomputer Business Applications, 3 cr

HCOP 1620, Medical Terminology for Health Professions, 3 cr

HIMC 1840, Introduction to Health Records, 3 cr

HIMC 1850, Computerized Health Information, 3 cr

HIMC 2110, Cancer Registry Organization and Management, 3 cr

HIMC 2115, Cancer Registry Operations, 3 cr

HIMC 2120, Cancer Disease, Coding, and Staging, 4 cr

HIMC 2125, Oncology Treatment and Coding, 4 cr

HIMC 2130, Abstracting Methods, 4 cr

HIMC 2135, Follow-up, Data Quality, and Utilization, 4 cr

HIMC 2140, Professional Practice/Clinical Practicum, 4 cr

HIMC 2600, Human Diseases for Health Professionals, 3 cr

HIMC 2610, Pharmacology, 2 cr

**TOTAL..... 60 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Cancer Registry Management program at RCTC, students will achieve the following outcomes:

- Identify reportable cancer cases, code and stage primary site, histology, and extent of disease.
- Abstract patient cancer data while monitoring timeliness, completeness, and accuracy of data.

# RCTC PROGRAM PLAN

- Support cancer registry organization and structure while assuring patient privacy, data integrity, and security.
- Compare and differentiate between organizations involved in collecting data and those involved in creating data standards.
- Perform cancer patient follow-up activities to identify second primaries, recurrence, and spread of disease.
- Take part in the role of reporting cancer data to health care officials, medical staff, epidemiologists, and regulatory organizations for use in cancer prevention and control.

## **ADDITIONAL NOTES:**

**Program Accreditation:** Rochester Community and Technical College is accredited by the National Cancer Registrars Association (NCRA).

Upon graduation, students are eligible to apply to take National Cancer Registrars Association exam to become an Oncology Data Specialist (ODS).

## **PROGRAM ENTRANCE REQUIREMENTS:**

To be admitted to the program, students must meet admission criteria and complete two (2) applications and return them to RCTC Admissions and Records:

- RCTC Application for admission: <https://www.rctc.edu/admissions>
- Program Application: <https://www.rctc.edu/program/crm/admission/>

## **Notice of National Criminal Background Check Requirement**

Background checks are required to ensure a safe environment for both students and the public and to meet the contractual requirements of area healthcare facilities. Students who fail to submit and pass a background check cannot complete or maintain enrollment in the program. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>

Revised: 02/14/2024

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## CANCER REGISTRY MANAGEMENT

Certificate

### I. PROGRAM CORE REQUIREMENTS.....26 CREDITS

HIMC 2110, Cancer Registry Organization and Management, 3 cr

HIMC 2115, Cancer Registry Operations, 3 cr

HIMC 2120, Cancer Disease, Coding, and Staging, 4 cr

HIMC 2125, Oncology Treatment and Coding, 4 cr

HIMC 2130, Abstracting Methods, 4 cr

HIMC 2135, Follow-up, Data Quality, and Utilization, 4 cr

HIMC 2140, Professional Practice/Clinical Practicum, 4 cr

**TOTAL .....26 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Cancer Registry Management program at RCTC, students will achieve the following outcomes:

- Identify reportable cancer cases, code and stage primary site, histology, and extent of disease.
- Abstract patient cancer data while monitoring timeliness, completeness, and accuracy of data.
- Support cancer registry organization and structure while assuring patient privacy, data integrity, and security.
- Compare and differentiate between organizations involved in collecting data and those involved in creating data standards.
- Perform cancer patient follow-up activities to identify second primaries, recurrence, and spread of disease.
- Take part in the role of reporting cancer data to health care officials, medical staff, epidemiologists, and regulatory organizations for use in cancer prevention and control.

### **ADDITIONAL NOTES:**

**Program Accreditation:** Rochester Community and Technical College is accredited by the National Cancer Registrars Association (NCRA).

Upon graduation, students are eligible to apply to take the National Cancer Registrars Association exam to become a Certified Tumor Registrar (CTR).

### **PROGRAM ENTRANCE REQUIREMENTS:**

To be admitted to the program, students must meet admission criteria and complete two (2) applications and return them to RCTC Admissions and Records:

- RCTC Application for admission: <https://www.rctc.edu/admissions>
- Program Application: <https://www.rctc.edu/program/crm/admission/>
- Admission criteria: minimum of an Associate degree or 60 college credits with required prerequisite courses: Medical Terminology for Health Professions (HCOP 1620), Computerized Health Information (HIMC 1850), and one of the following:

# RCTC PROGRAM PLAN

- Two semesters of Anatomy and Physiology (BIOL 1217 and BIOL 1218) OR
- One semester of Anatomy and Physiology (BIOL 1107), Human Diseases (pathophysiology) (HIMC 2600), and Pharmacology (HIMC 2610).

## **Notice of National Criminal Background Check Requirement**

Background checks are required to ensure a safe environment for both students and the public and to meet the contractual requirements of area healthcare facilities. Students who fail to submit and pass a background check cannot complete or maintain enrollment in the program. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>

Revised: 07/17/2019

Implementation: Fall 2019

# RCTC PROGRAM PLAN

## CARDIOVASCULAR INVASIVE SPECIALIST

Associate of Applied Science

*An Affiliated Program with the Mayo Clinic School of Health Sciences*

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....22 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....4 CR**

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 3: NATURAL SCIENCES .....15 CR**

BIOL 1217, Anatomy and Physiology I, 4 cr

BIOL 1218, Anatomy and Physiology II, 4 cr

CHEM 1117, General, Organic and Biological Chemistry I, 4 cr

PHYS 1103, Principles of Physics, 3 cr

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

**RECOMMENDED:**

PHIL 1135, Bioethics, 3 cr **OR**

PHIL 1125, Ethics, 3 cr

**II. PROGRAM CORE REQUIREMENTS.....41 CREDITS**

Year 1: August-May (All courses are Mayo courses)

CVIS 1010, Introduction to Cardiology, 2 cr

CVIS 1020, Introduction to Electrocardiography, 2 cr

Year 2: June-May

CVIS 2010, Cardiovascular Physiology & Pathophysiology, 4 cr

CVIS 2020, Invasive Cardiology I, 5 cr

CVIS 2030, Cardiovascular Pharmacology, 2 cr

CVIS 2021, Invasive Cardiology II, 6 cr

CVIS 2040, Clinical, 6 cr

CVIS 2060, Diagnostic Imaging and Fluoroscopy, 2 cr

CVIS 2070, Internship, 12 cr

**TOTAL .....63 CREDITS**

# RCTC PROGRAM PLAN

## REGISTERED CARDIOVASCULAR INVASIVE SPECIALIST COURSE SEQUENCE

LENGTH: 21 months

### FALL SEMESTER (RCTC & MAYO)

BIOL 1217	4 cr
CHEM 1117	4 cr
PHYS 1103	3 cr
CVIS 1010	2 cr

**TOTAL 13 cr**

### SPRING SEMESTER (RCTC & MAYO)

BIOL 1218	4 cr
ENGL 1117	4 cr
PHIL 1125/1135	3 cr
CVIS 1020	2 cr

**TOTAL 13 cr**

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**TOTAL (YEAR 1)**

**26 cr**

### YEAR 2 JUNE-AUGUST (SUMMER SESSION)

CVIS 2010	4 cr
CVIS 2020	5 cr
CVIS 2060	2 cr

### YEAR 2 AUGUST –DECEMBER (FALL SEMESTER)

CVIS 2030	2 cr
CVIS 2021	6 cr
CVIS 2040**	6 cr

### YEAR 2 JANUARY-MAY (SPRING SEMESTER)

CVIS 2070**	12 cr
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**TOTAL (YEAR 2)**

**37 cr**

**\*\*Clinical Hours = 64 hours = 1 semester credit**

### **PROGRAM OUTCOMES:**

Upon completion of the Cardiovascular Invasive Specialist program at RCTC, students will achieve the following outcomes:

- Fundamental understanding of the principles underlying the clinical profession of cardiovascular technology.
- Ability to demonstrate a working clinical knowledge of modalities utilized for diagnostic and interventional cardiology procedures.
- Ability to articulate the basics of skill acquisition for self-directed learning for continuing education relating to the field of invasive interventional cardiology after successful completion of their formal studies.
- Ability to demonstrate the technical skills in the clinical setting in primary areas of cardiovascular technology practice.



# RCTC PROGRAM PLAN

- Ability to demonstrate the basic clinical skills, techniques, and competencies required to practice as a cardiovascular technologist in order to perform and assist with a broad base of diagnostic and interventional cardiovascular procedures.
- Awareness and commitment to practicing according to the clinical standards, ethical principles, and the legal requirements of the profession of cardiovascular technology; and to the values of the Mayo Clinic, and Mayo Clinic School of Health Sciences.
- Demonstrate the awareness of cultural and diversity differences in the workplace as evidenced by the ability to practice in a continuum of diverse health care environments.
- Exemplify appropriate and professional skills of interpersonal communication with all patients and with all other members of the health care team.
- Actively engage in multifaceted roles of an active professional, including technologist, educator, researcher, collaborator, advocate and life-long learner.
- Ability to demonstrate an understanding of the responsibilities of all health care workers to contribute to the enhancement of the health and welfare of society.

## **ADDITIONAL NOTES:**

**PURPOSE:** This program educates graduates to work in collaboration and under the supervision of physicians to assist with the preparation and to perform diagnostic and therapeutic invasive cardiology procedures. The technologist must have the technical skills and competence to assist with these invasive procedures. Invasive cardiovascular procedures are performed in a clinical cardiovascular laboratory environment.

The areas of study are cardiovascular anatomy and physiology, cardiovascular pathophysiology, electrocardiography, cardiovascular pharmacology, diagnostic angiography, interventional angiography, electrophysiology, cardiac pacing, cardiovascular hemodynamics, valvular assessment, pediatric/congenital heart disease assessment, cardiac/coronary physio instrumentation and electronics associated with the cardiac laboratory environment.

Cardiovascular anatomy and physiology and pathophysiology concentrate on the structures, function, and disease processes of the heart. Angiography and interventional cardiology concentrate on the specific entities of coronary anatomy and treatment(s) for various disease entities of the heart. The cardiac electrical system and its diagnosis and treatment(s) are the areas concentrated on in electrophysiology and cardiac pacing. Advanced cardiac assessment (i.e.: hemodynamics, coronary physiology, cardiac valve study, congenital heart disease, etc.) concentrate on in-depth cardiovascular anatomical and physiological data. Instrumentation, electronics, and x-ray basics concentrate on the radiation and electrical processing and safety in the clinical cardiovascular laboratory setting.

**ADMISSION:** Students are admitted into this program through the Mayo Clinic School of Health Sciences Cardiovascular Invasive Specialist Program. The application for admission to the CVIS Program, Mayo Clinic School of Health Sciences must be obtained online (<https://college.mayo.edu/academics/health-sciences-education/cardiovascular-invasive-specialist-minnesota/how-to-apply/>) or from the Mayo Clinic School of Health Sciences and submitted no later than March 1. Following appointment to the program by the Mayo Clinic School of Health Sciences, students must apply to RCTC. Admission is competitive. It is based on previous education, work experience, goal statement, letters of reference, and an interview. Science and math courses must be completed within the previous five years.

# RCTC PROGRAM PLAN

## **PROGRAM ENTRANCE REQUIREMENTS:**

- Required: High school diploma or equivalent.
- Basic computer competence or keyboarding
- High School biology and chemistry are required; High School physics is recommended or completion of the RCTC or college transfer equivalents
- High School algebra II and placement at an algebra course beyond this class on a college placement test or completion of RCTC MATH 0099 or the equivalent
- Graduation in the upper one-half of the high school graduating class with a 2.75 GPA or better.

*\*Science and math prerequisite courses must have been completed within five years of your application to the program.*

- College level reading skills and writing readiness as tested by ASAP or prior college course work.
- Proof of completion of a CPR course is required prior to beginning CVIS 1010 and must be current through either the American Heart Association Cardiopulmonary Resuscitation & Emergency Cardiac Care for Health Care Provider.

## **MORE INFORMATION REQUIREMENTS:**

Registration and Sequence of Courses: This is a 21-month program consisting of 63 credits. During the first two semesters at RCTC, students will take general education courses as well as CVIS courses. (All Year 1 courses must be completed before proceeding into Year 2 course work at Mayo). After that time all the coursework is at the Mayo Medical Center – St. Mary's Hospital campus and at Mayo affiliated sites. Course sequences are specified on the Degree Program Sheet.

**Program Completion:** Those who complete the program will be awarded a Certificate of Completion by the Mayo Clinic College of Medicine and Science and the Mayo Clinic School of Health Sciences, and an Associate in Applied Science Degree by RCTC.

Graduates are eligible to take professional certification examinations given by Neurodiagnostic Credentialing and Accreditation (ABRET), American Association of Electrodiagnostic Technologists (AAET), American Board of Electrodiagnostic Medicine (ABEM)) and the Board of Registered Polysomnographic Technologists (BRPT).

Revised: 05/14/2019

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## CARPENTRY

Diploma

### I. PROGRAM CORE REQUIREMENTS.....32 CREDITS

- CR 1600, Carpentry Theory I, 3 cr
- CR 1610, Residential Blueprint Reading, 2 cr
- CR 1612, Shop Practice I, 2 cr
- CR 1622, Carpentry Theory II, 3 cr
- CR 1623, Rough Framing, 5 cr
- CR 1625, Footings and Foundations, 2 cr
- CR 1627, Roof Systems, 2 cr
- CR 1632, Construction Estimating, 3 cr
- CR 1635, Shop Practice II, 2 cr
- CR 1636, Interior Finishing, 4 cr
- CR 1637, Exterior Finishing, 4 cr

**TOTAL .....32 CREDITS**

### PROGRAM OUTCOMES:

Upon completion of the Carpentry program at RCTC, students will achieve the following outcomes:

- Show skills in communication, confident decision-making, and team work enabling students to work as a productive member of a construction crew.
- Demonstrate the safe use of the appropriate tools, materials, and techniques as required to carry out work on a building project.
- Read and interpret information from blueprints and specifications.
- Estimate materials and labor costs to complete a building project.
- Perform general carpentry skills, apply codes, and safety standards.
- Adapt a sense of pride, professionalism, and the desire to progress and excel in the construction trades.
- Build character and gain confidence to seek employment within the skilled trades.

### ADDITIONAL NOTES:

**PURPOSE:** The Carpentry major is designed to prepare students for careers as carpenters in residential and commercial construction, furniture manufacturing, cabinet shops and building maintenance fields. Course instruction includes carpentry theory, shop practice, foundations, rough framing, interior and exterior finishing, blueprint reading and cost estimating. Students will have hands on experience with power tools including nails guns, power saws and various woodworking equipment. The primary activity of the program is the construction of a residential home that includes site layout, footings, framing, roofing, insulating, drywall and finish trim. Two-thirds of the instruction is onsite at the construction location. Graduates typically start as entry-level carpenters and with further education and experience can become journeyman, foremen or business owners.

Revised: 08/15/2019

Implementation: Fall 2019

# RCTC PROGRAM PLAN

## CHEMISTRY TRANSFER PATHWAY

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### **GENERAL EDUCATION REQUIREMENTS.....31 CREDITS**

*Complete at least 31 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### **GOAL 1: WRITTEN AND ORAL COMMUNICATION .....11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

#### **GOAL 2: CRITICAL THINKING MAY BE MET BY ANY COURSE IN MnTC 1-10 GOALS**

#### **GOAL 3: NATURAL SCIENCES .....9 CR**

CHEM 1127, Chemical Principles I, 4 cr

PHYS 1127, Classical Physics I, 5 cr

#### **GOAL 4: MATHEMATICS/LOGICAL REASONING.....5 CR**

MATH 1127, Calculus, 5 cr

#### **GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

Credits from MnTC Goal 5

#### **GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

Credits from MnTC Goal 6

### **II. PROGRAM REQUIREMENTS.....22 CREDITS**

CHEM 1128, Chemical Principles II, 4 cr

CHEM 2127, Organic Chemistry I, 4 cr

CHEM 2128, Organic Chemistry II, 4 cr

MATH 1128, Calculus II, 5 cr

PHYS 1128, Classical Physics II, 5 cr

### **III. ELECTIVES.....7 CREDITS**

Credits recommended from MnTC Goal 7, 8, 9, or 10

### **TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Chemistry Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Demonstrate basic knowledge and understanding of the fundamentals of experimental and theoretical chemistry.
- Apply skills in analytical thinking and problem solving to experimental and theoretical data.
- Demonstrate skills in laboratory operations including making measurements, preparing solutions, operating instrumentation, designing experiments, preparing samples for various analyses.
- Provide clear and compelling data and analysis in oral and written communication including papers, posters, or presentations.
- Work both independently and collaboratively in the classroom and in the laboratory.
- Apply learned concepts to life outside the classroom.

## **ADDITIONAL INFORMATION:**

The Chemistry Transfer Pathway, AS offers students an opportunity to earn course credits that directly transfer to a designated Chemistry bachelor's degree program at Minnesota State universities. The entire curriculum has been carefully designed to meet bachelor's degree program requirements for transfer students planning initial study at a Minnesota State college. Students planning to transfer to non-system universities are advised to consult with their intended transfer institution as early as possible to determine transferability of the courses in this curriculum.

This transfer pathway degree will transfer to the following designated baccalaureate degree majors:

At Bemidji State University:

Chemistry - ACS Approved, BS

At Metropolitan State University:

Chemistry, BS

At Minnesota State University, Mankato:

Chemistry - ACS Approved, BS

At Minnesota State University, Moorhead:

Chemistry – ASC Approved, BS

At Southwest Minnesota State University:

Chemistry, BA

At St. Cloud State University:

Chemistry – ASC Approved, BS

At Winona State University:

Chemistry – ASC Approved, BS

Revised: 11/13/2018

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## CHILD DEVELOPMENT

Certificate

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....4 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....4 CR**

ENGL 1117, Reading and Writing Critically I, 4 cr

### II. PROGRAM CORE REQUIREMENTS.....12 CREDITS

ECCE 1001, Introduction to Early Childhood Care and Education, 3 cr **OR**

ECCE 1220, Health, Safety and Wellness, 3 cr

ECCE 1210, Child Growth and Development, 3 cr

ECCE 1232, Guidance: Managing the Physical and Social Environment, 3 cr

ECCE 1235, Intentional Teaching through Learning Environments, 3 cr

**TOTAL.....16 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Child Development program at RCTC, students will achieve the following outcomes:

- Establish and maintain respectful, responsive, and reciprocal relationships with children and families.
- Promote child development and learning.
- Use developmentally effective approaches.
- Make informed professional decisions based on professional knowledge and, reflection and critical thinking, and collaboration.
- Successfully complete clinical experiences in a variety of settings.

### **ADDITIONAL NOTES:**

**PURPOSE:** The purpose of the Child Development certificate is to provide specialized training and education that develops student's professional knowledge, skills, and dispositions to work as aides and assistants with young children in a variety of settings.

### **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Information about completing the background study will be available from program faculty.

Revised: 02/11/2020

Implementation: Fall 2021

# RCTC PROGRAM PLAN

## CLINICAL NEUROPHYSIOLOGY TECHNOLOGY

Associate in Applied Science

*An Affiliated Program with the Mayo Clinic School of Health Sciences*

- I. MINNESOTA TRANSFER CURRICULUM (MNTC)/**
- GENERAL EDUCATION REQUIREMENTS ..... 25 CREDITS**
- GOAL 1: WRITTEN AND ORAL COMMUNICATION ..... 7 CR**
- COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**  
 COMM 1130, Interpersonal Communication, 3 cr  
 ENGL 1117, Reading and Writing Critically I, 4 cr
- GOAL 3: NATURAL SCIENCES ..... 12 CR**
- BIOL 1110, Human Biology, 4 cr  
 BIOL 1216, Anatomy and Physiology of the Nervous and Respiratory Systems, 2 cr  
 CHEM 1101, Elements of Chemistry, 3 cr **OR** Higher  
 PHYS 1103, Principles of Physics, 3 cr **OR** Higher
- GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES ..... 3 CR**
- PSYC 1611, Psychology of Adjustment, 3 cr **OR**  
 PSYC 2618, General Psychology, 4 cr
- GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY ..... 3 CR**
- RECOMMENDED:**  
 PHIL 1135, Bioethics, 3 cr
- II. MAYO CLINIC CNT CORE REQUIREMENTS ..... 56 CREDITS**
- The following courses are offered through the Mayo Clinic School of Health Sciences:*
- CNT 1101, Orientation to CNT, 3 cr  
 CNT 1102, CNT Techniques EEG, 2 cr  
 CNT 1103, CNT Techniques NCS, 2 cr  
 CNT 1104, CNT Techniques EP, 1 cr  
 CNT 1105, CNT Techniques Autonomic, 1 cr  
 CNT 1106, CNT Techniques PSG, 2 cr  
 CNT 1109, CNT Professional Development I, 1 cr  
 CNT 1110, CNT Instrumentation, 2 cr  
 CNT 1112, Applied Concepts I EEG, 3 cr  
 CNT 1113, Applied Concepts II NCS, 3 cr  
 CNT 1114, Orientation to the Clin Lab /Prof Dev II, 2 cr  
 CNT 2210, Neurophysiology Lecture Series, Part I, 1 cr  
 CNT 2211, Neurophysiology Lecture Series, Part II, 3 cr  
 CNT 2220, Clinical Practice EEG I, 3 cr  
 CNT 2221, Clinical Practice EEG II, 3 cr  
 CNT 2222, Clinical Practice EEG III, 3 cr  
 CNT 2230, Clinical Practice NCS I, 3 cr

# RCTC PROGRAM PLAN

CNT 2231, Clinical Practice NCS II, 3 cr  
 CNT 2240, Clinical Practice EP/NCS, 3 cr  
 CNT 2250, Clinical Practice Autonomic, 3 cr  
 CNT 2260, Clinical Practice PSG I, 3 cr  
 CNT 2261, Clinical Practice PSG II, 3 cr  
 CNT 2270, Clinical Practice Elective, 3 cr

**TOTAL.....81 CREDITS**

## **PROGRAM OUTCOMES:**

Upon completion of the Clinical Neurophysiology Technology program at RCTC, students will achieve the following outcomes:

- Know the practical applications and principles of clinical neurophysiology technology, including structure and function of the nervous system, instrumentation, and neurological disorders diagnosed by neurodiagnostic testing
- Demonstrate knowledge of electroencephalography (EEG), nerve conduction studies (NCS), evoked potentials (EP), polysomnography (PSG) and autonomic testing at a level which will meet requirements for passing national registry/certification examinations
- Acquire practical skills in EEG, NCS, EP, PSG and autonomic testing and apply these skills to provide compassionate, safe and appropriate patient care and understand their role as part of a clinical team providing comprehensive care for patients
- Acquire skills of self-directed learning so as to update their knowledge of neurophysiology after completion of their formal studies
- Understand the use of quality improvement techniques to enhance the accuracy and appropriateness of neurodiagnostic testing
- Commit to practice according to the ethical principles and legal requirements of the profession of clinical neurophysiology technology and the values of Mayo Clinic
- Demonstrate cultural competency and respect for diversity in all professional interactions
- Exhibit appropriate and professional skills of interpersonal communication with all patients and other members of the healthcare team
- Understand the responsibilities of all healthcare workers to contribute to enhancing the health and welfare of society

## **ADDITIONAL NOTES:**

PURPOSE: Mayo Clinic School of Health Sciences (MCSHS) offers a 24-month program in neurodiagnostics (EEG, NCS, EP, PSG and autonomic testing). Neurodiagnostics is an exciting and challenging career involving the use of sophisticated equipment to perform tests that assist physicians in the diagnosis and evaluation of diseases of the brain, peripheral and autonomic nervous system and disorders of sleep and wakefulness. The technologist must be able to analyze data online making certain that it is viable and interpretable. Studies are performed in a laboratory, emergency room, operating room, intensive care unit, special monitoring units or at the patient's bedside.

Revised: 12/30/2022

Implementation: Fall 2023



# RCTC PROGRAM PLAN

## COACHING

Diploma

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....4 CREDITS**

**GOAL 3: NATURAL SCIENCES - Choose from one of the following:**

BIOL 1107, Fundamentals of Anatomy and Physiology, 4 cr

BIOL 1110, Human Biology, 4 cr

BIOL 1217, Anatomy and Physiology I, 4 cr

### II. PROGRAM CORE REQUIREMENTS.....26 CREDITS

HLTH 1114, Responding to Emergencies, 3 cr

PHED 2155, Introduction to Kinesiology, 3 cr

PHED 2249, Prevention and Care of Athletic Injuries I, 3 cr

PHED 2252, Sport Psychology, 3 cr

PHED 2253, Sport Nutrition for Performance, 3 cr

PHED 2261, Officiating Principle, 3 cr

PHED 2270, Intro to Physical Education, Health, Rec, Coaching, Fitness & Sport Mgmt, 2 cr

PHED 2271, Coaching Principles, 3 cr

PHED 2295, Sport Internship I, 3 cr

### III. PROGRAM ELECTIVES.....5 CREDITS

**Choose a minimum of one of the following courses:**

PHED 2260, Basketball Officiating, 1 cr

PHED 2272, Techniques of Coaching Football, 1 cr

PHED 2273, Techniques of Coaching Volleyball, 1 cr

PHED 2274, Techniques of Coaching Basketball, 1 cr

PHED 2275, Techniques of Coaching Baseball, 1 cr

PHED 2276, Techniques of Coaching Softball, 1 cr

PHED 2277, Techniques of Coaching Soccer, 1 cr

PHED 2278, Techniques of Coaching Wrestling, 1 cr

**Choose a minimum of one of the following courses:**

PHED 1190, Strength, Agility and Quickness Training for Football Athletes, 1 cr

PHED 1191, Strength, Agility and Quickness Training for Volleyball/Soccer Athletes, 1 cr

PHED 1192, Strength, Agility and Quickness Training for Basketball Athletes, 1 cr

PHED 1193, Strength, Agility and Quickness Training for Wrestling Athletes, 1 cr

PHED 1194, Strength, Agility and Quickness Training for Baseball/Softball Athletes, 1 cr

PHED 2180, Critical Analysis of Football, 1 cr

**Electives:**

HLTH 1108, Weight Management through Nutrition and Fitness, 3 cr

PHED 1105, Lifetime Fitness, 3 cr

PHED 1122, Circuit Training, 1 cr

PHED 1132, Speed and Power Running, 1 cr

# RCTC PROGRAM PLAN

PHED 1133, Strength Training for Men and Women, 1 cr  
 PHED 1150, Basic TRX Training, 1 cr  
 PHED 1151, High Intensity Interval Training (HITT) with TRX Suspension Training, 1 cr  
 PHED 1189, Boot Camp, 1 cr  
 PHED 2154, Introduction to Biomechanics, 3 cr  
 PHED 2240, Methods of Group Fitness Instruction, 3 cr  
 PHED 2241, Essentials of Personal Training, 3 cr  
 PHED 2242, Essentials of Strength and Conditioning, 3 cr  
 PHED 2245, Group Fitness/Personal Trainer Certification Exam Prep, 2 cr  
 PHED 2280, Introduction to Sport Facility Management, 3 cr  
 REC 2210, Recreation Program Leadership, 3 cr

**TOTAL .....35 CREDITS**

## **PROGRAM OUTCOMES:**

Upon completion of the Coaching program at RCTC, students will achieve the following outcomes:

- Demonstrate effective professional communication skills with clients and professional networks.
- Apply critical thinking skills in program planning and development, and perform responsible decision making in ethical and legal situations.
- Describe the characteristics, structure, and function of human anatomy, as well as, the understanding of basic exercise physiology, and prevention and care of sports injuries.

Revised: 05/08/2018

Implementation: Fall 2018

# RCTC PROGRAM PLAN

## CODING SPECIALIST

Diploma

### I. PROGRAM CORE REQUIREMENTS.....40 CREDITS

- BIOL 1107, Fundamentals of Anatomy and Physiology, 4 cr
- HCOP 1620, Medical Terminology for Health Professions, 3 cr
- AOP 2350, Microcomputer Business Applications, 3 cr
- HIMC 1800, Legal Aspects of Health Information, 3 cr
- HIMC 1820, CPT Coding, 3 cr
- HIMC 1840, Introduction to Health Records, 3 cr
- HIMC 1850, Computerized Health Information, 3 cr
- HIMC 1910, Reimbursement, 2 cr
- HIMC 2010, ICD-10-CM Coding, 4 cr
- HIMC 2020, ICD-10-PCS Coding, 3 cr
- HIMC 2030, Advanced Coding, 3 cr
- HIMC 2600, Human Diseases for Health Professionals, 3 cr
- HIMC 2610, Pharmacology, 2 cr
- HIMC 2835, CCA/CPA Review, 1 cr

**TOTAL..... 40 CREDITS**

### PROGRAM OUTCOMES:

Upon the completion of the Coding Specialist program at RCTC, students will achieve the following:

- Code, classify, and index diagnoses and procedures for the purpose of reimbursement, standardization, retrieval and statistical analysis.
- Maintain the accuracy and completeness of the electronic health record including intranet and internet applications as defined by organizational policy, accreditation, licensure, and external regulations and standards.
- Apply legal principles, policies, regulations and standards to protect the privacy, confidentiality, and security of health information.
- Demonstrate practical application of theories learned, including the ability to value self and work ethically with others in a diverse population.
- Use appropriate terminology in the areas of human anatomy, physiology, human diseases, and pharmacology when interpreting healthcare reports.

### PROGRAM ENTRANCE REQUIREMENTS:

#### PREREQUISITES:

- This program is offered predominately online. Computer requirements are listed on the RCTC Online web page at: <http://www.rctc.edu/online/>.

Upon successfully completing RCTC's online Coding Specialist program, one is eligible to take the national examination sponsored by AAPC and earn the Certified Professional Coder (CPC) credential.

# RCTC PROGRAM PLAN

## Notice of National Criminal Background Check Requirement

Background checks are required to ensure a safe environment for both students and the public and to meet the contractual requirements of area health care facilities. Students who fail to submit and pass a background check cannot complete or maintain enrollment in the program. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/cite/245C.15>.

Revised: 03/13/2024

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## COMMUNITY HEALTH WORKER

Certificate

<b>I. CHW CORE REQUIREMENTS.....</b>	<b>16 CREDITS</b>
CHW 1000, Community Health Worker: Role, Advocacy, Outreach and Resources 3 cr	
CHW 1100, Health Communication, Teaching and Capacity Building, 3 cr	
CHW 1200, Documentation, Legal and Ethical Issues in Community Health Work, 3 cr	
CHW 1300, Health Promotion Competencies, 5 cr	
CHW 1400, CHW Internship, 2 cr	
<b>TOTAL .....</b>	<b>16 CREDITS</b>

### **PROGRAM OUTCOMES:**

Upon completion of the Community Health Worker program at RCTC, students will achieve the following outcomes:

- Assess the health status and health needs of the community.
- Promote wellness by providing culturally appropriate health information to clients and providers.
- Assist in navigating the health and/or human services system.
- Advocate for individual and community needs as they related to health.
- Build individual and community capacity.
- Interpret legal and ethical boundaries as they pertain to the role of the Community Health Worker.
- Provide direct services as they relate to the role of the CHW

### **ADDITIONAL NOTES:**

**PURPOSE:** The Community Health Worker (CHW) program will prepare you to obtain employment in a variety of organizations. Community Health Workers perform a broad range of health-related functions and play an important role in bridging the gap between cultures and health care systems. A CHW will work with health care organizations to increase cultural competence, improve access to health care for racial and ethnic minorities, improve the quality of care for the chronically ill, promote healthy communities, and educate families about access to and use of health care coverage.

Revised: 05/09/2023

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## COMMUNICATION STUDIES

Certificate

<b>I. PROGRAM CORE REQUIREMENTS.....</b>	<b>12 CREDITS</b>
COMM 1114, Fundamentals of Public Speaking, 3 cr	
COMM 1130, Interpersonal Communication, 3 cr	
COMM 2100, Intercultural Communication, 3 cr	
COMM 2130, Team/Small Group Communication, 3 cr	
<b>II. ADDITIONAL REQUIREMENTS.....</b>	<b>4 CREDITS</b>
<b>Select four credits from the courses listed below:</b>	
COMM 2214, Career Communication, 3 cr	
COMM 2299, Special Topics in Communication Studies, 1-3 cr	
ENGL 1117, Reading and Writing Critically I, 4 cr	
<b>TOTAL .....</b>	<b>16 CREDITS</b>

### **PROGRAM OUTCOMES:**

Upon completion of the Communication Studies program at RCTC, students will achieve the following outcomes:

- Select appropriate communication choices for specific audiences.
- Demonstrate effective listening in diverse settings.
- Utilize strategies to reduce communication apprehension.

### **ADDITIONAL NOTES:**

**PURPOSE:** The Communication Studies Certificate is based on practical application of communication theory. Employers surveyed often report teamwork, conflict management skills, oral communication, and interpersonal skills are crucial to success in the workplace. This certificate offers a broad depth and breadth of knowledge and skills in the Communication field.

The Communication Studies Certificate can also build a solid foundation for further study in Communication for students who plan to transfer to four-year institutions by offering a broad spectrum of communication theory and application.

Revised: 12/13/2022

Implementation: Fall 2023

# RCTC PROGRAM PLAN

## COMMUNICATION STUDIES TRANSFER PATHWAY

Associate of Arts

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....44 CREDITS**

**GOAL 1: COMMUNICATION ..... 11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

**GOAL 2 is fulfilled when all other MnTC goals for this plan are completed.**

**GOAL 3: NATURAL SCIENCES ..... minimum of 6 CR**

A minimum of two courses with a lab from two different areas that meet MnTC Goal 3

**GOAL 4: MATHEMATICAL/LOGICAL REASONING ..... minimum of 3 CR**

Credits from MnTC Goal 4

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES..... minimum of 9 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 5

*Recommended:* COMM 1110, Introduction to Mass Communication, 3 cr;

COMM 1337, Social Media, 3 cr

**GOAL 6: THE HUMANITIES AND FINE ARTS ..... minimum of 9 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 6

*Recommended:* COMM 1125, Oral Interpretation, 3 cr

**GOAL 7: HUMAN DIVERSITY.....3 CR**

COMM 1130, Interpersonal Communication, 3 cr

**GOAL 8: GLOBAL PERSPECTIVE.....3 CR**

COMM 2100, Intercultural Communication, 3 cr

**GOAL 9: ETHICAL & CIVIC RESPONSIBILITY**

To be met by a course taken in Goal 3, 5 or 6.

**GOAL 10: PEOPLE & THE ENVIRONMENT**

To be met by a course taken in Goal 3, 5 or 6.

### II. FIRST YEAR EXPERIENCE ..... 0-1 CREDIT\*

FYEX 1000, College Success Strategies, 1 cr

\*Students entering RCTC with less than 12 credits at the time of admission and pursuing an RCTC Associate of Arts degree are required to take FYEX 1000, College Success Strategies.

# RCTC PROGRAM PLAN

## III. HEALTH AND PHYSICAL EDUCATION REQUIREMENTS .....3 CREDITS

Any combination of Health courses (numbered 1102, 1109, 1110, 1111, 1114, 1132, 1135, 2126) and/or Physical Education courses (numbered 1100-1199). 1 credit may be from Varsity Athletics (PHED 1210-1236; PHED 2210-2236).

## IV. PROGRAM REQUIREMENTS.....3 CREDITS

COMM 2130: Team/Small Group Communication, 3 cr

## V. ELECTIVES: Any course numbered above 1000 .....9-10 CREDITS

**TOTAL.....60 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Communication Studies Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Select appropriate communication choices for specific audiences.
- Demonstrate effective listening in diverse settings.
- Utilize strategies to reduce communication apprehension.

### **ADDITIONAL NOTES:**

The Communication Studies Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated Communication Studies bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities\* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

\*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

This transfer pathway degree will transfer to the following designated baccalaureate degree majors:

At Metropolitan State University:

Professional Communication, BA

At Minnesota State University, Mankato:

Communication Studies, BS

At Southwest Minnesota State University:

Communication Studies, BA

At St. Cloud State University:

Communication Studies, BA

Communication Studies Supplementary, BA

Communication Studies Interdepartmental, BA



# RCTC PROGRAM PLAN

At Winona State University:  
Communication Studies, BA

Revised: 07/15/2019

Implementation: Fall 2019

# RCTC PROGRAM PLAN

## COMPUTER INFORMATION SYSTEMS

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....37 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....11 CR

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

#### GOAL 3: NATURAL SCIENCES .....6 CR

Choose two courses with labs from two different areas from MnTC Goal 3

#### GOAL 4: MATHEMATICS/LOGIAL REASONING .....3 CR

MATH 1119, Applied Calculus for Business and Economics, 3 cr **OR**

MATH 1127, Calculus I, 5 cr

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....11 CR

ECON 2214, Principles of Microeconomics, 4 cr

ECON 2215, Principles of Macroeconomics, 4 cr

Remaining credits from MnTC Goal 5 courses (other than ECON), 3 cr

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....6 CR

Choose a minimum of two credits from two different areas from MnTC Goal 6

### II. PROGRAM CORE REQUIREMENTS.....23 CREDITS

ACCT 2217, Principles of Accounting I, 4 cr

COMP 1150, Computer Science Concepts, 3 cr

COMP 2243, Programming & Problem Solving, 4 cr

COMP 2247, Algorithms and Data Structure, 4 cr

MATH 2218, Discrete Mathematics, 4 cr

MATH 2350, Introduction to Mathematical Statistics, 4 cr

#### TOTAL .....60 CREDITS

#### **PROGRAM OUTCOMES:**

Upon completion of the Computer Information Systems program at RCTC, students will achieve the following outcomes:

- Apply mathematical foundations, algorithmic principles, and computer science concepts to analyze and design software solutions.
- Design, implement and validate software using Java in conjunction with graphical user interface.

# RCTC PROGRAM PLAN

- Apply current design techniques including the effective application of data structures, recursion, and object-oriented technologies for software solutions.
- Evaluate the efficiency of software algorithm using Big O notation.
- Develop logical resonating and problem-solving skills.
- Work as part of a team to analyze, design and implement software solutions.
- Define basic computer terminology and identify ethical issues related to the use of computers.
- Create and manipulate word processing documents, spreadsheets, and databases.

Revised: 11/13/2018

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## COMPUTER SCIENCE TRANSFER PATHWAY

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....30-31 CREDITS**

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

**GOAL 4: MATHEMATICS/LOGICAL REASONING.....5 CR**

MATH 1127, Calculus I, 5 cr

**MnTC ELECTIVES.....14-15 CR**

Select additional MnTC credits from Goal 3, 5, 6, 7, 8, 9 or 10.

Credits need to be completed from four other goal areas. Students should choose the goal areas depending on the transfer university destination. Students should consult with their advisor before selecting courses for satisfying the goal areas.

### II. PROGRAM CORE REQUIREMENTS.....16 CREDITS

COMP 2243, Programming and Problem Solving, 4 cr

COMP 2247, Algorithms and Data Structure, 4 cr

COMP 2275, Computer Architecture, 4 cr

MATH 2218, Discrete Mathematics, 4 cr

### III. GENERAL ELECTIVES.....13-14 CREDITS

Select additional MnTC credits from Goal 3, 5, 6, 7, 8, 9 or 10.

Students should consult with their advisor before selecting courses. Choose courses based on the transfer university destination and track into which transfer is intended.

COMP 1140, Introduction to Database and SQL, 3 cr

COMP 1150, Computer Science Concepts, 3 cr

MATH 2350, Introduction to Mathematical Statistics, 4 cr **OR**

MATH 1128, Calculus II, 5 cr

COMP 1731, Programming for the Internet, 3 cr **OR**

COMP 1741, Java Script, 3 cr **OR**

COMP 1751, Mobile Application Development, 3 cr

**TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Computer Science Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Apply mathematical foundations, algorithmic principles, and computer science concepts to analyze and design software solutions.
- Design, implement and validate software using Java in conjunction with graphical user interface.
- Apply current design techniques including the effective application of data structures, recursion, and object-oriented technologies for software solutions.
- Evaluate the efficiency of software algorithm using Big O notation.
- Develop logical resonating and problem-solving skills.
- Work as part of a team to analyze, design and implement software solutions.

Revised: 02/09/2021

Implementation: Fall 2021

# RCTC PROGRAM PLAN

## CRIMINAL JUSTICE TRANSFER PATHWAY

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### **GENERAL EDUCATION REQUIREMENTS.....40 CREDITS**

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### **GOAL 1: WRITTEN AND ORAL COMMUNICATION .....11 CR**

ENGL 1117, Reading and Writing Critically I, 4 cr  
 ENGL 1118, Reading and Writing Critically II, 4 cr  
 COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**  
 COMM 1130, Interpersonal Communication, 3 cr

#### **GOAL 3: NATURAL SCIENCES .....6 CR**

BIOL 1100, Environmental Biology, 3 cr **OR**  
 BIOL 1101, Elements of Biology, 3 cr **AND**  
 CHEM 1031, Introduction to Forensic Chemistry, 3 cr

#### **GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 CR**

MATH 1111, Quantitative Reasoning, 3 cr **OR**  
 MATH 2208, Fundamentals of Statistics, 4 cr

#### **GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....10 CR**

POLS 1615, Introduction to American Government, 3 cr  
 PSYC 2618, General Psychology, 4 cr  
 SOC 1614, Introduction to Sociology, 3 cr

#### **GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....10 CR**

HUM/SPAN 1001, Introduction to Hispanic Cultures, 3 cr  
 PHIL 1125, Ethics, 3 cr  
 SPAN 1101, Beginning Spanish I, 4 cr

### II. PROGRAM REQUIREMENTS.....18 CREDITS

#### **Professional Required Courses:**

CRJU 1305, Introduction to Criminal Justice, 3 cr  
 CRJU 1308, Introduction to Corrections, 3 cr  
 CRJU 2127, Juvenile Law and Procedures, 3 cr  
 CRJU 2215, Homeland Security/Defense, 3 cr  
 CRJU 2122, Criminal Procedure, 3 cr  
 SOC 2625, Minority Group Relations, 3 cr

### III. ELECTIVES.....2 CREDITS

Any course numbered above 1000 as needed to achieve a total of 60 credits.

**TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Criminal Justice program at RCTC, students will achieve the following outcomes:

- Demonstrate an understanding of the Criminal Justice System and criminal procedure.
- Demonstrate an understanding of the Juvenile Justice System.
- Demonstrate an understanding of the Ethics in Criminal Justice.
- Demonstrate an understanding of the Minnesota Criminal Statutes.
- Demonstrate an understanding of the Corrections System and Probation.

## **ADDITIONAL NOTES:**

The Criminal Justice Transfer Pathway, AS offers students an opportunity to earn course credits that directly transfer to a designated Criminal Justice bachelor's degree program at Minnesota State universities. The entire curriculum has been carefully designed to meet bachelor's degree program requirements for transfer students planning initial study at a Minnesota State college. Students planning to transfer to non-system universities are advised to consult with their intended transfer institution as early as possible to determine transferability of the courses in this curriculum.

## **Program requirements:**

Grade of "C" or better is required of all general education, Criminal Justice and Peace Officer course requirements.

## **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Information about completing the background study will be available from program faculty.

Revised: 09/14/2021

Implementation: Fall 2022

# RCTC PROGRAM PLAN

## CYBERSECURITY

Associate of Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....19 CREDITS**

#### **GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR**

ENGL 1117, Reading and Writing Critically I, 4 cr

COMM 1114: Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130: Interpersonal Communication, 3 cr

#### **GOAL 4: MATH.....3 CR**

MATH 1115, College Algebra, 3 cr **OR**

MATH 2208: Fundamentals of Statistics, 4 cr

#### **GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES.....6 CR**

**Recommended Courses:**

ECON 1101: Introduction to Economics (3 cr)

ECON 2214: Microeconomics (4 cr)

POLS 1615: Introduction to American Government (3 cr)

#### **GOAL 6: HUMANITIES AND THE FINE ARTS.....3 CR**

**Recommended Course:**

PHIL 1050 Computing and AI Ethics (3 cr)

### **II. PROGRAM CORE REQUIREMENTS.....30 CREDITS**

COMP 1140, Intro to Database & SQL, 3 cr

COMP 1150, Computer Science Concepts, 3 cr

COMP 1010: Linux Operating Systems, 3 cr

COMP 1080: Networking Protocols and Analysis, 4 cr

COMP 2243, Programming & Problem Solving, 4 cr

COMP 2275, Computer Architecture, 4 cr

COMP 2048: Introduction to Cybersecurity, 4 cr

COMP 2049: Cybersecurity Systems, 4 cr

COMP 2502: Cybersecurity Internship, 1 – 3 cr

### **III. PROGRAM ELECTIVE COURSES.....11 CREDITS**

Any classes numbered 1000 or above to achieve a total of 60 credits.

**TOTAL ..... 60 CREDITS**



# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completing of the Cybersecurity Program at RCTC, students will achieve the following outcomes:

1. Acquire a comprehensive understanding of cybersecurity principles and practices, including threat identification, risk management, and incident response.
2. Become proficient in programming languages such as Python, enabling them to develop secure software solutions and automate tasks.
3. Use their knowledge of computer architecture to identify and mediate vulnerabilities.
4. Gain expertise in SQL, allowing them to manage databases securely and understand the vulnerabilities associated with database systems.
5. Secure network communications and identify vulnerabilities within a network.
6. Develop a nuanced understanding of the legal and ethical considerations in cybersecurity.
7. Gain hands-on experience in real-world cybersecurity scenarios, enhancing their readiness for the job market.

This program will prepare students to take the CompTIA Security+ and CompTIA CySa+ exams. The program aligns to the standards set forth by the National Centers of Academic Excellence in Cybersecurity (NCAE-C) program.

Revised: 2/6/24

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## DENTAL ASSISTANT

Associate of Applied Science

*Program Accreditation: American Dental Association, Commission on Dental Accreditation, in compliance with the standards set forth by the ADA Council on Dental Education.*

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....17 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communications, 3 cr

ENGL 1117, Reading & Writing Critically I, 4 cr

**GOAL 3: NATURAL SCIENCES .....4 CR**

BIOL 1110, Human Biology, 4 cr

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

PSYC 1611, Psychology of Adjustment, 3 cr **OR**

PSYC 2618, General Psychology, 4 cr

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

Credits from MnTC Goal 6

### II. PROGRAM CORE REQUIREMENTS.....47 CREDITS

DA 1200, Dental Communications, 3 cr

DA 1210, Dental Science I, 3 cr

DA 1215, Dental Practice Management, 2 cr

DA 1220, Chairside Assisting I, 6 cr

DA 1225, Dental Infection Control, 2 cr

DA 1230, Preventive Dentistry, 2 cr

DA 1250, Dental Science II, 3 cr

DA 1255, Dental Materials, 4 cr

DA 1260, Chairside Assisting II, 4 cr

\*DA 1265, Expanded Functions, 7 cr

\*DA 1270, Expanded Functions II, 1 cr

\*DA 1280, Dental Assisting Internship, 7 cr

\*DA 1275: Dental Radiology, 3 cr

**TOTAL .....64 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Dental Assistant program at RCTC, students will achieve the following outcomes:

- Demonstrate a working knowledge of dental terminology and the dental sciences.
- Collect systematically and record accurately record diagnostic and clinical data.
- Employ current principles of effective chairside assisting for general and dental specialty procedures and dental/medical emergencies.
- Demonstrate proficiency in performing expanded functions for Minnesota licensed dental assistants.
- Implement current principles and guidelines of dental infection control, aseptic techniques and hazards management.
- Prepare and manipulate chairside and dental laboratory materials and fabricate dental models, impression trays and appliances.
- Provide oral health instruction to dental patients and community groups.
- Perform patient reception and dental business office procedures effectively.
- Communicate effectively and establish positive working relationships with patients and members of the dental health care team.
- Function in a responsible, professional and ethical manner.

## **ADDITIONAL NOTES:**

**PURPOSE:** The Dental Assistant major is designed to provide the student with the technical knowledge, manual skills, clinical experiences, communication skills, and positive attitudes toward work required to make the graduate a valuable member of the dental health care profession.

The dental assistant may assist the dentist at chairside, perform expanded functions and dental laboratory procedures, provide personal oral care instruction, or function as a dental receptionist/dental office manager. The program prepares the student to function in both general and specialty dental practices.

Clinical experience is obtained in the technically current dental clinic. The clinic has twelve operatories equipped for four-handed dentistry, a recirculation/sterilization room, a darkroom for processing x-rays, and a complete dental laboratory. Patients come to the dental clinic for tooth polishing, fluoride treatments, dental x-rays, pit and fissure sealants, and personal oral care instruction. A dentist is on staff to aid in the direct instruction and supervision of students, along with dentists from the community who give guest presentations. In the final semester of the program, students will further their clinical experience through three assigned internships in different dental offices in southeastern Minnesota.

Graduates are eligible to sit for the Minnesota licensure exam, Minnesota jurisprudence exam and the national certification exam for dental assistants.

For more information on program admission requirements, please see the department website at <http://www.rctc.edu/program/da/admission.html>.

# RCTC PROGRAM PLAN

## **MORE INFORMATION REQUIREMENTS:**

(\*Students must show current certification in either American Red Cross: CPR for the Professional Rescuer or American Heart Association: BLS Healthcare Provider to enroll in this course. The certification will need to remain active throughout the final semester in Dental Assisting.)

## **Notice of Minnesota Background Study Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background study will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Students in the program will also be required to complete a national criminal background study. Information about completing both background studies will be available from program faculty.

Revised: 07/11/2019

Implementation: Fall 2019

# RCTC PROGRAM PLAN

## DENTAL ASSISTANT: EXPANDED FUNCTIONS OPTION

Certificate

*Program Approval: Expanded Functions curriculum is approved by the Minnesota Board of Dentistry.*

### I. PROGRAM CORE REQUIREMENTS.....13 CREDITS

DA 1225, Dental Infection Control, 2 cr

\*DA 1265, Expanded Functions, 7 cr

\*DA 1270, Expanded Functions II, 1 cr

\*DA 1275: Dental Radiology, 3 cr

**TOTAL .....13 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Dental Assistant program at RCTC, students will achieve the following outcomes:

- Demonstrate a working knowledge of dental terminology and the dental sciences.
- Collect systematically and record accurately record diagnostic and clinical data.
- Employ current principles of effective chairside assisting for general and dental specialty procedures and dental/medical emergencies.
- Demonstrate proficiency in performing expanded functions for Minnesota licensed dental assistants.
- Implement current principles and guidelines of dental infection control, aseptic techniques and hazards management.
- Prepare and manipulate chairside and dental laboratory materials and fabricate dental models, impression trays and appliances.
- Provide oral health instruction to dental patients and community groups.
- Perform patient reception and dental business office procedures effectively.
- Communicate effectively and establish positive working relationships with patients and members of the dental health care team.
- Function in a responsible, professional and ethical manner.

### **ADDITIONAL NOTES:**

**PURPOSE:** This certificate program focuses specifically on Minnesota Expanded Functions for Dental Assistants. Approved curriculum includes academic and laboratory/clinical experience in all Minnesota Dental Assistant Expanded Functions. For entry into this certificate program, the applicant must currently be a Certified Dental Assistant, certified by the Dental Assisting National Board, Inc. and hold a current CPR/First Aid Certificate from the American Red Cross. Upon successful completion of the certificate requirements, the student is eligible to take the Minnesota Licensing Examination for Dental Assistants.

Clinical experience is obtained in the technically current dental clinic. The clinic has twelve operatories equipped for four-handed dentistry, a recirculation/sterilization room, a darkroom for processing x-rays, a dental reception area, and a complete dental laboratory. Patients come to the dental clinic for tooth polishing, fluoride treatments, dental x-rays, pit and fissure sealants and preventive oral care instruction. A dentist is on staff to aid in the direct instruction and supervision of students.

# RCTC PROGRAM PLAN

## **MORE INFORMATION REQUIREMENTS:**

(\*Students must show current certification in either American Red Cross: CPR for the Professional Rescuer or American Heart Association: BLS Healthcare Provider to enroll in this course. The certification will need to remain active throughout the final semester in Dental Assisting.)

## **Notice of Minnesota Background Study Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background study will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Students in the program will also be required to complete a national criminal background study. Information about completing both background studies will be available from program faculty.

Revised: 07/11/2019

Implementation: Fall 2019

# RCTC PROGRAM PLAN

## DENTAL ASSISTANT

Diploma

*Program Accreditation: American Dental Association, Commission on Dental Accreditation, in compliance with the standards set forth by the ADA Council on Dental Education.*

### I. PROGRAM CORE REQUIREMENTS.....47 CREDITS

- DA 1200, Dental Communications, 3 cr
- DA 1210, Dental Science I, 3 cr
- DA 1215, Dental Practice Management, 2 cr
- DA 1220, Chairside Assisting I, 6 cr
- DA 1225, Dental Infection Control, 2 cr
- DA 1230, Preventive Dentistry, 2 cr
- DA 1250, Dental Science II, 3 cr
- DA 1255, Dental Materials, 4 cr
- DA 1260, Chairside Assisting II, 4 cr
- \*DA 1265, Expanded Functions, 7 cr
- \*DA 1270, Expanded Functions II, 1 cr
- \*DA 1280, Dental Assisting Internship, 7 cr
- \*DA 1275: Dental Radiology, 3 cr

**TOTAL .....47 CREDITS**

### PROGRAM OUTCOMES:

Upon completion of the Dental Assistant program at RCTC, students will achieve the following outcomes:

- Demonstrate a working knowledge of dental terminology and the dental sciences.
- Collect systematically and record accurately record diagnostic and clinical data.
- Employ current principles of effective chairside assisting for general and dental specialty procedures and dental/medical emergencies.
- Demonstrate proficiency in performing expanded functions for Minnesota licensed dental assistants.
- Implement current principles and guidelines of dental infection control, aseptic techniques and hazards management.
- Prepare and manipulate chairside and dental laboratory materials and fabricate dental models, impression trays and appliances.
- Provide oral health instruction to dental patients and community groups.
- Perform patient reception and dental business office procedures effectively.
- Communicate effectively and establish positive working relationships with patients and members of the dental health care team.
- Function in a responsible, professional and ethical manner.

# RCTC PROGRAM PLAN

## **ADDITIONAL NOTES:**

**PURPOSE:** The Dental Assistant major is designed to provide the student with the technical knowledge, manual skills, clinical experiences, communication skills, and positive attitudes toward work required to make the graduate a valuable member of the dental health care profession. The Dental Assistant Program may be completed in one year as a full-time student, or in two years as a part-time student.

The dental assistant may assist the dentist at chairside, perform expanded functions and dental laboratory procedures, or act as a receptionist or an office manager. The program prepares the student to function in both general and specialty dental practices.

Clinical experience is obtained in the technically current dental clinic. The clinic has twelve operatories equipped for four-handed dentistry, a recirculatory/sterilization room, a darkroom for processing x-rays, and a complete dental laboratory. Patients come to the dental clinic for tooth polishing, fluoride treatments, dental x-rays, pit and fissure sealants and personal oral care instruction. A dentist is on staff to aid in the direct instruction and supervision of students, along with dentists from the community who give guest presentations. In the summer semester, students will further their clinical experience through three assigned internships in different dental offices in southeastern Minnesota.

Graduates are eligible to sit for the Minnesota licensure exam, Minnesota jurisprudence exam and the national certification exam for dental assistants.

For more information on program admission requirements, please see the department website at <https://www.rctc.edu/program/da/admission>

## **MORE INFORMATION REQUIREMENTS:**

(\*Students must show current certification in either American Red Cross: CPR for the Professional Rescuer or American Heart Association: BLS Healthcare Provider to enroll in this course. The certification will need to remain active throughout the final semester in Dental Assisting.)

### Notice of Minnesota Background Study Requirement

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background study will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Students in the program will also be required to complete a national criminal background study. Information about completing both background studies will be available from program faculty.

Revised: 07/11/2019

Implementation: Fall 2019



# RCTC PROGRAM PLAN

## DENTAL HYGIENE

Associate of Applied Science

*Program Accreditation: American Dental Association, Commission on Dental Accreditation.*

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....32 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communications, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 3: NATURAL SCIENCES .....16 CR**

BIOL 1217, Anatomy and Physiology I, 4 cr

BIOL 1218, Anatomy and Physiology II, 4 cr

BIOL 2021, General Microbiology, 4 cr

CHEM 1117, General, Organic and Biological Chemistry I, 4 cr

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....6 CR**

PSYC 1611, Psychology of Adjustment, 3 cr **OR**

PSYC 2618, General Psychology, 4 cr

SOC 1614, Introduction to Sociology, 3 cr

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

Credits from MnTC Goal 6

### II. PROGRAM CORE REQUIREMENTS.....51 CREDITS

BIOL 1211, Principles of Nutrition, 3 cr

DH 1510, Principles of Dental Hygiene I, 2 cr

DH 1511, Dental Hygiene Practice I, 3 cr

DH 1512, Oral Anatomy, 4 cr

DH 1520, Principles of Dental Hygiene, II, 2 cr

DH 1521, Dental Hygiene Practice II, 5 cr

DH 1523, Oral Pathology, 2 cr

DH 1524, Periodontology, 2 cr

DH 1525, Dental Imaging for Interpretation, 3 cr

DH 2530, Principles of Dental Hygiene III, 3 cr

DH 2531, Dental Hygiene Practice III, 6 cr

DH 2532, Pain Control, 2 cr

DH 2533, Dental Pharmacology, 2 cr

DH 2540, Principles of Dental Hygiene IV, 3 cr

DH 2541, Dental Hygiene Practice IV, 6 cr

DH 2542, Community Dental Health, 3 cr

**TOTAL .....83 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Dental Hygiene program at RCTC, students will achieve the following outcomes:

- Manage the ethical, legal and regulatory issues related to the practice of dental hygiene.
- Synthesize information in a critical, scientific and evidence-based manner.
- Promote interdisciplinary collaboration to improve the oral and general health of the public.
- Promote health and disease prevention activities for diverse populations.
- Assessment: Collect comprehensive patient data to identify physical and oral health status.
- Planning: Establish a dental hygiene care plan that reflects the realistic goals and treatment strategies to facilitate optimal oral health.
- Implementation: Provide treatment that includes preventive and therapeutic procedures to facilitate the patient's optimal oral health.
- Evaluation: Evaluate the outcome of the preventive and therapeutic procedures related to the patient's optimal oral health.

## **ADDITIONAL NOTES:**

**PURPOSE:** The goal of the program is to provide academic and clinical educational opportunities for capable individuals to acquire the knowledge, skills, and attitudes necessary for the professional practice of dental hygiene. The program prepares individuals for a variety of career opportunities in private dental offices, schools, hospitals, clinics, and public health agencies. Members of the dental hygiene profession act as allied personnel to the dentist and make it possible for more complete preventive dental services to be provided to the public. The dental hygienist provides direct patient care and functions as an integral member of the dental team.

## **PROGRAM ENTRANCE REQUIREMENTS:**

General education credits may be taken prior to entering the Dental Hygiene program. The dental hygiene courses are a four-semester sequence and must be taken without a break in registration.

## **PROGRAM COMPLETION:**

Those who complete the program will be awarded an Associate in Applied Science Degree by RCTC. Graduates are eligible to take the licensure exams, which are required in all 50 states for the practice of dental hygiene.

Graduates are eligible to take the 3 licensure exams which are required in all 50 states for the practice of dental hygiene.

## **Notice of Minnesota Background Study Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background study will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Students in the program will also be required to complete a national criminal background study. Information about completing both background studies will be available from program faculty.

Revised: 05/14/2019

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## DIGITAL MARKETING SPECIALIST

Certificate

<b>I. PROGRAM CORE REQUIREMENTS .....</b>	<b>17 CREDITS</b>
BUS 2201, Principles of Marketing, 3 cr	
BUS 2202, Consumer Promotions & Digital Marketing, 3 cr	
BUS 2143, Social Media Management Strategies, 3 cr	
BUS 2144, E-Business Management 3 cr	
BUS 2508, Sales Management & Analytics 3 cr	
BUS 2296, Business Internship, 2 cr	
<b>TOTAL .....</b>	<b>17 CREDITS</b>

### **PROGRAM OUTCOMES:**

Upon completion of the Digital Marketing Specialist certificate program at RCTC, students will achieve the following outcomes:

- Utilize data driven analysis to create digital marketing solutions.
- Identify influencing factors within the digital landscape that drive the consumer buying behavior, product preferences, channel selection, device preference and social media.
- Create digital marketing strategies through digital channels including search engines, website, social media, email and mobile applications.
- Develop effective digital marketing plans based on current business market conditions.
- Preparation to take the Google Analytics & Google AdWords certification exams.

### **ADDITIONAL NOTES:**

Upon successful completion of the certificate, students are prepared to complete the Google Analytics and Google AdWords certification exams.

Revised: 02/26/2020

Implementation: Fall 2020

# RCTC PROGRAM PLAN

## EARLY CHILDHOOD EDUCATION TRANSFER PATHWAY

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MNTC)/

#### **GENERAL EDUCATION REQUIREMENTS ..... 30 CREDITS**

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### **GOAL 1: WRITTEN AND ORAL COMMUNICATION ..... 11 CR**

COMM 1130, Interpersonal Communication, 3 cr  
ENGL 1117, Reading and Writing Critically I, 4 cr  
ENGL 1118, Reading and Writing Critically II, 4 cr

#### **GOAL 3: NATURAL SCIENCES ..... 3 CR**

BIOL 1101, Elements of Biology, 3 cr **OR**  
SCIE 1100, Integrated Biology and Chemistry, 3 cr **OR**  
SCIE 1200, Integrated Earth Science and Physics, 3cr

#### **GOAL 4: MATHEMATICAL/LOGICAL REASONING ..... 4 CR**

MATH 1090, Statway Statistics II, 4 cr **OR**  
MATH 2208, Fundamentals of Statistics, 4 cr

#### **GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES.....6 CR**

PSYC 2626, Human Growth and Development, 3 cr  
SOC 2612, Marriage and the Family Across the Life Span, 3 cr

#### **GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY.....3 CR**

HUM 1500, Compassion Studies, 3cr **OR**  
ENGL 2297, Children's Literature, 3cr

#### **GOAL 7: HUMAN DIVERSITY ..... 3 CR**

SOC 2625 Minority Group Relations, 3cr

### II. PROGRAM CORE REQUIREMENTS ..... 30 CREDITS

ECCE 1001, Introduction to Early Childhood Care and Education, 3 cr  
ECCE 1210, Child Growth and Development, 3cr  
ECCE 1220, Health, Safety and Wellness, 3 cr  
ECCE 1232, Positive Guidance and Social Emotional Development, 3cr  
ECCE 1235, Intentional Teaching Through Learning Environments, 3 cr  
ECCE 1320, Observing and Assessing, 3 cr  
ECCE 1505, Family Relations, 3 cr  
ECCE 2250, Foundations of Language and Literacy, 3 cr  
ECCE 2630, Teaching Young Children with Special Needs, 3 cr  
ECCE 2810, Practicum 1, 3 cr

**TOTAL ..... 60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Child, Youth and Family Studies program at RCTC, students will achieve the following outcomes:

- Establish and maintain respectful, responsive, and reciprocal relationships with children and families.
- Promote children's development, learning, and agency.
- Embed a culturally responsive lens to family and community relations and embrace human differences rather than ignore or fear them.
- Use developmentally effective and equitable approaches.
- Apply content knowledge to design and implement meaningful, engaging curriculum.
- Promote the health, safety, and wellbeing of children and families.
- Make informed professional decisions based on professional knowledge, ethics, an equity lens, reflection, collaboration, and outcomes.
- Successfully complete clinical experiences in a variety of settings.

## **ADDITIONAL INFORMATION:**

### **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/cite/245C.15>. Information about completing the background study will be available from program faculty.

Revised: 12/08/2020

Implementation: Fall 2020

# RCTC PROGRAM PLAN

## EMERGENCY MEDICINE PARAMEDIC

Associate of Science

*Affiliated with the Mayo Clinic School of Health Sciences*

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### **GENERAL EDUCATION REQUIREMENTS.....32 CREDITS**

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### **GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR**

COMM 1114, Fundamentals of Public Speaking **OR** COMM 1130, Interpersonal Communications, 3 cr  
ENGL 1117, Reading and Writing Critically I, 4 cr

#### **GOAL 3: NATURAL SCIENCES .....12 CR**

BIOL 1217, Anatomy and Physiology I, 4 cr  
BIOL 1218, Anatomy and Physiology II, 4 cr  
CHEM 1117, General, Organic and Biological Chemistry I, 4 cr

#### **GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....10 CR**

PSYC 2618, General Psychology, 4 cr  
PSYC 2626, Human Growth and Development, 3 cr  
SOC 1614, Introduction to Sociology, 3 cr

#### **GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

PHIL 1135, Bioethics, 3 cr

### II. PROGRAM CORE REQUIREMENTS.....40 CREDITS

EMPP 1101, Paramedic Prep, 3 cr  
EMPP 1105, Paramedic Experience I, 3 cr  
EMPP 1205, Paramedic Experience II, 2 cr  
EMPP 1230, Principles of Pharmacology, 4 cr  
EMPP 1240, Paramedic Prep II, 3 cr  
EMPP 1250, Cardiology and Pulmonology, 4 cr  
EMPP 1255, Paramedic Experience III, 2 cr  
EMPP 2105, Paramedic Experience IV, 3 cr  
EMPP 2110, Medical Emergencies II, 4 cr  
EMPP 2120, Shock/Trauma, 3 cr  
EMPP 2205, Paramedic Internship, 2 cr  
EMPP 2210, Medical Emergencies I, 3 cr  
EMPP 2230, Simulation In-Situ Skills, 1 cr  
EMPP 2250, Paramedic Prep III, 3 cr

### III. ELECTIVES.....3 CREDITS

HLTH 1108, Weight Management Through Nutrition and Fitness, 3 cr  
HLTH 1111, Health Education, 3 cr

# RCTC PROGRAM PLAN

HLTH 1132, Drug Use and Abuse, 3 cr

MATH 1115, College Algebra, 3 cr

PHED 1105, Lifetime Fitness, 3 cr

**TOTAL.....75 CREDITS**

## **PROGRAM OUTCOMES:**

Upon completion of the Emergency Medicine Paramedic program at RCTC, students will achieve the following outcomes:

- Know the principles underlying the profession of paramedicine, including anatomy, physiology, pathology, pharmacology and disorders recognized and treated by paramedics.
- Demonstrate knowledge of the modalities and skills used in emergency medical services and the ability to assess objectively the evidence for their effectiveness.
- Acquire skills for life-long, self-directed learning to update their knowledge of the practice of paramedicine after completion of their formal studies.
- Acquire the practical skills needed to work as a competent paramedic delivering emergency medical services.
- Assume responsibility for independent judgment in making sound decisions regarding patient management.
- Apply these skills to appropriate, safe, effective and compassionate patient care.
- Understand the use of quality improvement techniques to enhance the accuracy and appropriate of patient care for the paramedic.
- Practice both independently and collaboratively as part of a clinical teams and health care systems.
- Practice according to the ethical principles and legal requirements of the profession of paramedicine and of Mayo Clinic.
- Demonstrate cultural competency, respect for diversity and the ability to practice in diverse healthcare settings in a multicultural society.
- Exhibit appropriate skills of interpersonal communication with patients and other members of the health team.
- Assume the multifaceted roles of an active professional, including practitioner, educator, researcher, collaborator, advocate and lifelong learner.
- Understand the responsibilities of all health care workers to contribute to enhancing health and welfare of society.
- Promote advancement of emergency medical services through practice, education and research.

## **ADDITIONAL NOTES:**

**PURPOSE:** As the most highly trained pre-hospital care provider in EMS, the paramedic accepts the challenging responsibility for patient care. Paramedicine is a relatively young field with a wide range of employment opportunities.

**APPLICATION TO THE PROGRAM:** Students are admitted into this program through the Mayo Clinic School of Health Sciences Emergency Medicine Paramedic Program. The application for admission to Mayo Clinic School of Health Sciences must be obtained online

# RCTC PROGRAM PLAN

(<https://college.mayo.edu/academics/health-sciences-education/emergency-medicine-paramedic-program-minnesota/>) no later than **April 1**.

Following appointment to the program by the Mayo Clinic School of Health Sciences, students must apply to RCTC for those enrolled in the Associate Degree track.

Admission is competitive. It is based on previous education, work experience, goal statement, letters of reference, and an interview. Science and math courses must be completed within the previous five years.

## **PROGRAM ENTRANCE REQUIREMENTS:**

- Required: High school diploma or GED (equivalent acceptable) or be a high school senior who expects to graduate by the time the program begins.
- Enrollment at RCTC.
- Elementary Algebra (MATH 0098) with a "C" or better or equivalent.
- Three credits of college composition, ENGL 1117 or higher suggested.
- State certified and nationally registered as an EMT-Basic or Intermediate.

*\*Biology and Chemistry courses must have been completed within five years of your application to the program.*

## **MORE INFORMATION REQUIREMENTS:**

**ADMISSION:** Admitted students are required to:

- Submit completed health forms, physical exam, immunizations, hepatitis, annual mantoux and health insurance documentation. Forms available online: <https://www.rctc.edu/services/health/>
- Complete the State of Minnesota Background Study Form (completed during the first week of the semester).

Upon successful completion of the program, students are eligible for the National Registry or state examination.

## **Notice of Minnesota Background Check Requirement**

**Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background study will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>**

For more information on this program please visit the Mayo Clinic School of Health Sciences site at: <http://www.mayo.edu/mshs/careers/emergency-medicine>

Revised: 05/14/2019

Implementation: Spring 2019



# RCTC PROGRAM PLAN

## EMERGENCY MEDICAL TECHNOLOGY

Certificate

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....16 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....4 CR**

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 2: CRITICAL THINKING MAY BE MET BY ANY COURSE IN MnTC 1-10 GOALS**

**GOAL 3: NATURAL SCIENCES .....8 CR**

BIOL 1107, Fundamentals of Anatomy and Physiology, 4 cr

CHEM 1117, General, Organic and Biological Chemistry I, 4 cr

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....4 CR**

PSYC 2618, General Psychology, 4 cr

**II. PROGRAM CORE REQUIREMENTS.....8 CREDITS**

EMT 1200, Emergency Medical Technician: Basic, 8 cr

**TOTAL .....24 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Emergency Medical Technology program at RCTC, students will achieve the following outcomes:

- Know the principles underlying the profession of paramedicine, including anatomy, physiology, pathology, pharmacology and disorders recognized and treated by paramedics.
- Demonstrate knowledge of the modalities and skills used in emergency medical services and the ability to assess objectively the evidence for their effectiveness.
- Acquire skills for life-long, self-directed learning to update their knowledge of the practice of paramedicine after completion of their formal studies.
- Acquire the practical skills needed to work as a competent paramedic delivering emergency medical services.
- Assume responsibility for independent judgment in making sound decisions regarding patient management.
- Apply these skills to appropriate, safe, effective and compassionate patient care.
- Understand the use of quality improvement techniques to enhance the accuracy and appropriate of patient care for the paramedic.
- Practice both independently and collaboratively as part of a clinical teams and health care systems.
- Practice according to the ethical principles and legal requirements of the profession of paramedicine and of Mayo Clinic.

# RCTC PROGRAM PLAN

- Demonstrate cultural competency, respect for diversity and the ability to practice in diverse healthcare settings in a multicultural society.
- Exhibit appropriate skills of interpersonal communication with patients and other members of the health team.
- Assume the multifaceted roles of an active professional, including practitioner, educator, researcher, collaborator, advocate and lifelong learner.
- Understand the responsibilities of all health care workers to contribute to enhancing health and welfare of society.
- Promote advancement of emergency medical services through practice, education and research.

## **ADDITIONAL NOTES:**

**PURPOSE:** The primary focus of the Emergency Medical Technician is to provide basic emergency medical care and transportation for critical and emergent patients who access the emergency medical system. The certificate EMT will receive general education courses that are designed to enhance their knowledge, skills and abilities. The program is also designed to meet the academic pre-requisites of the Emergency Medicine Paramedic Program.

## **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Information about completing the background study will be available from program faculty.

Revised: 11/15/2014

Implementation: Spring 2015

# RCTC PROGRAM PLAN

## ENGINEERING BROAD FIELD

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....34 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....4 CR

ENGL 1117, Reading and Writing Critically I, 4 cr

#### GOAL 3: NATURAL SCIENCES .....14 CR

CHEM 1127, Chemical Principles I, 4 cr  
PHYS 1127, Classical Physics I, 5 cr  
PHYS 1128, Classical Physics II, 5 cr

#### GOAL 4: MATHEMATICS/LOGICAL REASONING.....10 CR

MATH 1127, Calculus I, 5 cr  
MATH 1128, Calculus II, 5 cr

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR

Credits from MnTC Goal 5

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR

Credits from MnTC Goal 6

#### GENERAL EDUCATION ELECTIVE.....4 CR

Credits from MnTC Goal 1-6 (See an RCTC counselor for appropriate choices)

### II. PROGRAM CORE REQUIREMENTS.....12 CREDITS

ENGR 1101, Introduction to Engineering, 2 cr  
MATH 2237, Multivariable and Vector Calculus, 5 cr  
MATH 2238, Differential Equations and Linear Algebra, 5 cr

### III. RESTRICTED ENGINEERING ELECTIVES.....14 CREDITS

*Consult with an advisor or counselor to determine course selections, which are appropriate for your transfer institution. A minimum of 4 courses and 14 credits from one of the specialty areas should be chosen. See also [www.rctc.edu/program/engineering/](http://www.rctc.edu/program/engineering/) for additional advising resources.*

CHEM 1128, Chemical Principles II, 4 cr  
CHEM 2127, Organic Chemistry I, 4 cr  
CHEM 2128, Organic Chemistry II, 4 cr  
COMP 2243, Programming and Problem Solving, 4 cr  
ENGR 1152, Logic Design, 4 cr  
ENGR 2211, Statics, 3 cr  
ENGR 2212, Dynamics, 3 cr

# RCTC PROGRAM PLAN

ENGR 2213, Linear Circuit Analysis I, 4 cr  
 ENGR 2214, Linear Circuit Analysis II, 4 cr  
 ENGR 2221, Deformable Body Mechanics, 3 cr  
 ESCI 1114, Physical Geology, 4 cr  
 MATH 2350, Introduction to Mathematical Statistics, 4 cr

**TOTAL .....60 CREDITS**

## **PROGRAM OUTCOMES:**

Upon completion of the Engineering Broad Field program at RCTC, students will achieve the following core competencies:

- Apply algebra, trigonometry, and calculus to solve the equations generated by engineering problems.
- Apply basic physics principles such as force and energy to the analysis of practical engineering situations.
- Solve a problem by creating an appropriate diagram, identifying the essential physical variables, using physics principles to formulate equations, solving for the desired quantities, and thinking critically about the answers and whether they are reasonable.
- Write scientific reports detailing experimental procedures, results, and conclusions.
- Exhibit the ability to work collaboratively to achieve a common goal.

## **ADDITIONAL NOTES:**

This degree, as part of the Engineering Broad Field agreement, has an articulation agreement with Minnesota State University, Mankato; St. Cloud University; Winona State University; University of Minnesota; University of Minnesota, Duluth and any System college approved to offer the Associate of Science in Engineering Broad Field degree program.

## **MORE INFORMATION REQUIREMENTS:**

Note that:

- Completion of the Associate of Science in Engineering Broad Field degree does not guarantee admission to a baccalaureate degree program.
  - Students must meet university requirements and degree program admission requirements.
  - Baccalaureate engineering degree programs may have limited enrollment capacity with seats available on a competitive basis.
- Students accepted into a university must fulfill the baccalaureate program graduation requirements.

Revised: 11/13/2018

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## ENVIRONMENTAL SCIENCE

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....31 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....11 CR

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

#### GOAL 3: NATURAL SCIENCES .....7 CR

BIOL 1102, Plant Biology, 3 cr

BIOL 1220, General Biology I, 4 cr

#### GOAL 4: MATHEMATICS/LOGICAL REASONING.....4 CR

MATH 2208, Fundamentals of Statistics, 4 cr

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR

SOC 1614, Introduction to Sociology, 3 cr

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR

##### Choosing one of the following courses:

PHIL 1125, Ethics, 3 cr

PHIL 1130, Environmental Ethics, 3 cr

#### GOAL 10: PEOPLE AND THE ENVIRONMENT.....3 CR

BIOL 1100, Environmental Biology, 3 cr

### II. PROGRAM CORE REQUIREMENTS.....29 CREDITS

BIOL 1230, General Biology II, 4 cr

BIOL 1300, Biological Applications of GIS Technology, 3 cr

BIOL 1310, Environmental Science Seminar, 2 cr

BIOL 2000, Ecology, 4 cr

BIOL 2200, Zoology, 4 cr

BIOL 2300, Genetics, 4 cr

##### Choose one of the following:

CHEM 1127, Chemical Principles I and CHEM 1128, Chemical Principles II, 8 cr **OR**

PHYS 1117, Introductory Physics I and PHYS 1118, Introductory Physics II, 8 cr

**TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Environmental Science program at RCTC, students will achieve the following outcomes:

- Explain and the scientific method and demonstrate the ability to apply all aspects of it during scientific investigation.
- Demonstrate an ability to understand and apply biological concepts and processes.
- Show proper use of instruments and techniques in the laboratory.
- Demonstrate an ability to work independently and collaboratively.
- Exhibit responsible behavior and engagement as a student in biology.
- Understand and apply knowledge of GIS and GPS technology for purposes of spatial analysis, as integrated tools to determine, interpret, and visualize data and to formulate decisions based upon this knowledge.
- Recognize that biological evolution is the foundation and organizing principle of biology.

## **ADDITIONAL NOTES:**

An articulation agreement has been established between RCTC and Winona State University.

Revised: 02/09/2021

Implementation: Fall 2021

# RCTC PROGRAM PLAN

## EXECUTIVE OFFICE PROFESSIONAL

Associate of Applied Science

<b>I. MINNESOTA TRANSFER CURRICULUM (MnTC)/</b>	
<b>GENERAL EDUCATION REQUIREMENTS.....</b>	<b>16 CREDITS</b>
<b>GOAL 1: WRITTEN AND ORAL COMMUNICATION .....</b>	<b>3-4 CR</b>
ENGL 1109, Introduction to Professional and Technical Communication, 3 cr <b>OR</b>	
ENGL 1117, Reading and Writing Critically I, 4 cr	
<b>GOAL 7: HUMAN DIVERSITY.....</b>	<b>3 CR</b>
RECOMMEND: COMM 1130, Interpersonal Communication, 3 cr	
<b>GOAL 9: ETHICAL/CIVIC RESPONSIBILITY.....</b>	<b>3 CR</b>
RECOMMEND: PHIL 2130, Business Ethics, 3 cr	
<b>ANY MnTC GOAL 1-10 COURSES .....</b>	<b>6-7 CR</b>
<b>II. PROGRAM CORE REQUIREMENTS.....</b>	<b>25 CREDITS</b>
AOP 1101, Microsoft Windows and Office Fundamentals, 3 cr	
AOP 1030, Keyboarding II, 3 cr	
AOP 1320, Microsoft Word, 3 cr	
AOP 1360, Microsoft Excel, 3 cr	
AOP 2614, Customer Relations Management, 3 cr	
AOP 2617, Microsoft Outlook and Meeting Planning, 3 cr	
AOP 2220, Business Communications, 3 cr	
AOP 2622, Multimedia and Collaborative Technology, 3 cr	
AOP 2870, Employment Strategies, 1 cr	
<b>III. PATHWAY PROGRAM REQUIREMENTS.....</b>	<b>13 CREDITS</b>
AOP 1370, Microsoft Access, 1 cr	
AOP 2270, Integrated Office Procedures, 3 cr	
AOP 2330, Advanced Microsoft Word, 3 cr	
AOP 2360, Advanced Microsoft Excel, 3 cr	
AOP 2630, Emerging Technologies, 3 cr	
<b>IV. ELECTIVES.....</b>	<b>6 CREDITS</b>
<b>TOTAL.....</b>	<b>60 CREDITS</b>

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Executive Office Professional program at RCTC, students will achieve the following outcomes:

- Key at a speed rate of 45 GWPM with minimal errors.
- Exhibit professionalism and effective customer relations skills in writing and verbal communication with all stakeholder.
- Identify, analyze, and resolve current workplace issues and future needs by utilizing critical thinking skills, current software applications, and emerging technology.
- Create, format, and proofread business documents using correct business English.
- Create and format various data reports using advanced spreadsheet and database applications.

## **ADDITIONAL NOTES:**

**PURPOSE:** This program will prepare students for employment as Executive Office Professionals. Students will develop technology and critical thinking skills crucial to ensuring organization success and will learn high-level professional service to internal and external stakeholders. Graduates of this program will be able to provide proactive service by researching innovative and emerging technologies and by the use of data analytics. The expanded education requirements of this degree program will also meet the needs of students transferring to another program or institution.

**PROGRAM PREREQUISITES:** Students entering this program must be proficient in keyboarding skills at a minimum of 35 gross words per minute (GWPM). Students not meeting this requirement should enroll in AOP 1020 Keyboarding I as an elective course.

Revised: 9/12/2023

Implementation: Fall 2024



# RCTC PROGRAM PLAN

## FACILITY AND SERVICE TECHNOLOGY

Associate of Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....15 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....3 credits minimum**

COMM 1130, Interpersonal Communication (MnTC Goal 1, Goal 7), 3 cr

**GOAL 3: NATURAL SCIENCES OR**

**GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 credits minimum**

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY....3 credits minimum**

Six credits of any additional MnTC courses.....6 credits minimum

### II. PROGRAM CORE REQUIREMENTS.....54 CREDITS

#### Semester I

FST 1500, Power Plant Theory, 4 cr

FST 1510, Welding Theory, 1 cr

FST 1520, Welding Equipment Repair, 1 cr

FST 1530, Plumbing Theory, 1 cr

FST 1540, Power Plant Operation, 4 cr

FST 1550, Plumbing Lab, 2 cr

FST 1560, Basic Pneumatics/Hydraulics, 2 cr

FST 1570, Basic Boiler Theory, 1 cr

#### Semester II

FST 1611, Basic Electricity, 2 cr

FST 1621, Electrical Theory I, 3 cr

FST 1631, Electrical Lab I, 3 cr

FST 1641, Electrical Theory II, 3 cr

FST 1651, Electrical Lab II, 3 cr

FST 1661, Electrical Safety National Electric Code, 2 cr

#### Semester III

FST 2500, Refrigeration Theory, 3 cr

FST 2506, Refrigeration Lab, 3 cr

FST 2512, Commercial Refrigeration, 3 cr

FST 2518, Commercial Refrigeration Lab, 2 cr

#### Semester IV

FST 2602, HVAC/Refrigeration Systems Theory, 4 cr

FST 2612, HVAC/Refrigeration Systems Lab, 2 cr

FST 2622, HVAC/Control Systems Lab, 2 cr

FST 2632, HVAC Control Systems Theory, 3 cr

**TOTAL .....69 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Facility and Service Technology program at RCTC, students will achieve the following outcomes:

- Identify and work with boiler types and their related systems. Feedwater, steam, condensate, turbine, combustion and related controls.
- Identify and work with different welding processes. GTAW, GMAW, SMAW, Oxy-Acetylene, plasma and different applications.
- Identify and work with different plumbing fixtures and their repair. Understand potable, non-potable, DWV systems and their usages.
- Identify and work with hydraulic and pneumatic systems and their repair. Understand the application and working properties of each.
- Identify and work with electrical components, symbols and systems. Understand properties of electricity, diagnose, troubleshoot and repair electrical systems.
- Identify and work with different refrigeration systems. (Commercial and Domestic) Understand properties of Physics and Chemistry involved. Learn to diagnose, troubleshoot, maintain and repair the different systems.
- Identify and work with different residential and commercial HVAC systems and building computerized controls. Understand properties of each system, diagnose, troubleshoot, maintain and repair each system.
- In each step of education understand the trade related tools, personal protection equipment, and on the job, safety related to each system.
- Demonstrate professional ethics and accountability in each subject. Demonstrate job ready skills.
- In each area test and obtain state and federal licensing in each area of knowledge and practiced skill set. (if available)

## **NOTES:**

**PURPOSE:** The Facility and Service Technology major is designed to prepare students for careers requiring skills in the operation, maintenance, troubleshooting, and repair of electrical and mechanical equipment found in commercial electrical controls and programmable controls. Courses in residential and commercial refrigeration, air conditioning, pneumatics, heating and cooling control, and computerized energy management systems comprise the second year instruction. Graduates usually start at entry level positions in various maintenance operation areas in medical clinics, hospitals, waste to energy plants, power plants, hotels, educational manufacturing, processing and industrial facilities. Graduates have been employed as service technicians in the heating/ventilation/air conditioning (H.V.A.C.) field, building trades, and some are self-employed in the H.V.A.C. field. After completion of the second year, students who qualify may take the State examination for Second class "A" steam engineer's license and/or refrigeration certifications.

**ADDITIONAL NOTE:** Students must test at READ 0900 level before enrolling or obtain instructor permission. Students must have tested at appropriate Math level or successfully completed MATH 1015 before beginning Semester II courses or obtain instructor permission.

Revised: 02/08/2022

Implementation: Fall 2022

# RCTC PROGRAM PLAN

## FACILITY AND SERVICE TECHNOLOGY

Diploma

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....5 CREDITS**

AOP 2870, Employment Strategies, 1 cr

COMM 1000, Introduction to Workplace Communication, 3 cr **OR**

COMM 1130 Interpersonal Communication (MNTC Goal 1, Goal 7), 3 cr

MATH 1015, Applied Technical Math, 3 cr **OR**

MATH 1016, Technical Math Essentials, 1 cr

### II. PROGRAM CORE REQUIREMENTS.....64 CREDITS

#### Semester I

FST 1500, Power Plant Theory, 4 cr

FST 1510, Welding Theory and Safety, 1 cr

FST 1520, Welding and Equipment Repair, 1 cr

FST 1530, Plumbing Plant Theory, 1 cr

FST 1540, Power Plant Operation, 4 cr

FST 1550, Plumbing Lab, 2 cr

FST 1560, Basic Pneumatic/Hydraulics, 2 cr

FST 1570, Basic Boiler Theory, 1 cr

#### Semester II

FST 1611, Basic Electricity, 2 cr

FST 1621, Electrical Theory I, 3 cr

FST 1631, Electrical Lab I, 3 cr

FST 1641, Electrical Theory II, 3 cr

FST 1651, Electrical Lab II, 3 cr

FST 1661, Electrical Safety National Electric Code, 2 cr

#### Semester III

FST 2500, Refrigeration Theory, 3 cr

FST 2506, Refrigeration Lab, 3 cr

FST 2512, Commercial Refrigeration, 3 cr

FST 2518, Commercial Refrigeration Lab, 2 cr

FST 2555, Facility and Service Technology Internship III, 5 cr

#### Semester IV

FST 2602, HVAC/Refrigeration Systems Theory, 4 cr

FST 2612, HVAC/Refrigeration Systems Lab, 2 cr

FST 2622, HVAC/Control Systems Lab, 2 cr

FST 2632, HVAC Control Systems Theory, 3 cr

FST 2655, Facility and Service Technology Internship IV, 5 cr

**TOTAL .....69 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Facility and Service Technology program at RCTC, students will achieve the following outcomes:

- Identify and work with boiler types and their related systems. Feedwater, steam, condensate, turbine, combustion and related controls.
- Identify and work with different welding processes. GTAW, GMAW, SMAW, Oxy-Acetylene, plasma and different applications.
- Identify and work with different plumbing fixtures and their repair. Understand potable, non-potable, DWV systems and their usages.
- Identify and work with hydraulic and pneumatic systems and their repair. Understand the application and working properties of each.
- Identify and work with electrical components, symbols and systems. Understand properties of electricity, diagnose, troubleshoot and repair electrical systems.
- Identify and work with different refrigeration systems. (Commercial and Domestic) Understand properties of Physics and Chemistry involved. Learn to diagnose, troubleshoot, maintain and repair the different systems.
- Identify and work with different residential and commercial HVAC systems and building computerized controls. Understand properties of each system, diagnose, troubleshoot, maintain and repair each system.
- In each step of education understand the trade related tools, personal protection equipment, and on the job, safety related to each system.
- Demonstrate professional ethics and accountability in each subject. Demonstrate job ready skills.
- In each area test and obtain state and federal licensing in each area of knowledge and practiced skill set. (if available)

## **ADDITIONAL NOTES:**

**PURPOSE:** The Facility and Service Technology major is designed to prepare students for careers requiring skills in the operation, maintenance, troubleshooting, and repair of electrical and mechanical equipment found in commercial buildings. Instruction the first year includes courses in boiler operation, electricity, plumbing, tool usage, welding, electrical controls, and programmable controls. Courses in residential and commercial refrigeration, air conditioning, pneumatics, heating and cooling controls, and computerized energy management systems comprise the second year instruction. In the second year, students complete an internship to gain hands-on work experience.

After initial training, students may take the state examination for a special steam engineer's license. After completion of the second year, students who qualify may take the state examination for second class "A" steam engineer's license and/or refrigeration certifications. Graduates usually start at entry-level positions in various educational, manufacturing, processing, and industrial facilities. Graduates have been employed as service technicians in the heating/ventilation/air conditioning (H.V.A.C.) field, building trades, and some are self-employed in the H.V.A.C. field.

# RCTC PROGRAM PLAN

**PROGRAM ENTRANCE REQUIREMENTS:**

Students must test at READ 0900 level before enrolling or obtain instructor permission. Students must have successfully completed MATH 1015 or MATH 1016 before beginning Semester II courses or obtain instructor permission.

Revised: 02/08/2022

Implementation: Fall 2022

# RCTC PROGRAM PLAN

## ART + DESIGN: GRAPHIC DESIGN

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....30 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

#### GOAL 3: NATURAL SCIENCES .....3 CR

Credits from MnTC Goal 3

#### GOAL 4: MATHEMATICS/LOGICAL REASONING .....3 CR

Credits from MnTC Goal 4

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR

Credits from MnTC Goal 5

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....6 CR

ART 1111, Art History Survey I, 3 cr

ART 1112, Art History Survey II, 3 cr

#### MnTC GENERAL EDUCATION ELECTIVES.....8 CR

Credits from courses meeting MnTC competencies in Goal areas 1-10.

### II. PROGRAM CORE REQUIREMENTS.....27 CREDITS

ART 1120, Computer as Creative Media, 3 cr

ART 1121, 2D Design, 3 cr

ART 1124, Graphic Design I, 3 cr

ART 1130, Digital Art I, 3 cr

ART 1134, Drawing I, 3 cr

ART 1184, Photography I, 3 cr

ART 1223, Typography, 3 cr

ART 1232, Web Design I, 3 cr

ART 2224, Graphic Design II, 3 cr

### III. ELECTIVES.....3 CREDITS

#### Choose one of the following courses:

ART 1233, Web Design II, 3 cr

ART 2230, Digital Art II, 3 cr

ART 2240, Motion Graphics I, 3 cr

ART 2286, Photo Lighting Techniques, 3 cr

# RCTC PROGRAM PLAN

**TOTAL .....60 CREDITS**

## **PROGRAM OUTCOMES:**

Upon completion of the Graphic Design program at RCTC, students will achieve the following outcomes:

- Utilize the Elements of Art, Principles of Design, or Typography in order to create effective and aesthetically appropriate compositions.
- Demonstrate fundamental technical skills in the creation and presentation of design.
- Evaluate the aesthetic quality, cultural significance, personal reaction, and historical context of works of art and design.
- Develop unique and innovative solutions using conceptual thinking.
- Identify significant works of art and design throughout history.
- Explore a variety of media used in art and design.

## **ADDITIONAL NOTES:**

**PURPOSE:** The purpose of the Graphic Design A.S. Degree Program is to provide the first two years of experience for transfer to any higher education institution for careers in Graphic Design. There are many opportunities in Graphic Design careers such as designing logos, posters, packaging, and promotional materials; working on layout for magazines, books, and publications; and creating advertisements.

**PROGRAM ARTICULATION:** An articulation agreement has been established between Rochester Community and Technical College and Metropolitan State University. As a result, students will be able to transfer the Graphic Design Program as a package. Students will enter the transfer program earning full credit for RCTC's two-year degree program.

Revised: 04/13/2021

Implementation: Fall 2022

# RCTC PROGRAM PLAN

## GROUP FITNESS INSTRUCTOR

Certificate

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....4 CREDITS**

**GOAL 3: NATURAL SCIENCES .....4 CR**

**Choose one of the following:**

BIOL 1107, Fundamentals of Anatomy & Physiology, 4 cr

BIOL 1110, Human Biology, 4 cr

BIOL 1217, Anatomy & Physiology I, 4 cr

### II. PROGRAM CORE REQUIREMENTS.....20 CREDITS

HLTH 1108, Weight Management through Nutrition and Fitness, 3 cr

HLTH 1114, Responding to Emergencies, 3 cr

PHED 2240, Methods of Group Fitness Instruction, 3 cr

PHED 2242, Essentials of Strength and Conditioning, 3 cr

PHED 2249, Prevention and Care of Athletic Injuries, 3 cr

PHED 2270, Intro to Physical Education, Health, Rec, Coaching, Fitness & Sport Mgmt, 2 cr

PHED 2293, Personal Trainer/Group Fitness Instructor Field Experience, 2 cr

### III. PROGRAM ELECTIVES.....3 CREDITS

**Choose three credits from the following courses:**

PHED 1105, Lifetime Fitness, 3 cr

PHED 1122, Circuit Training, 1 cr

PHED 1124, Tai Chi and Meditation, 1 cr

PHED 1125, Yoga for Life, 1 cr

PHED 1128, Yoga for Life II, 1 cr

PHED 1126, Step Aerobics, 1 cr

PHED 1127, Body Toning, 1 cr

PHED 1132, Speed and Power Running, 1 cr

PHED 1133, Strength Training for Men and Women, 1 cr

PHED 1150, Basic TRX Training, 1 cr

PHED 1151, High Intensity Interval Training (HIIT) with TRX Suspension Training, 1 cr

PHED 1189, Boot Camp, 1 cr

PHED 1190, Strength, Agility and Quickness for Football Athletes, 1 cr

PHED 1191, Strength, Agility and Quickness for Volleyball and Soccer Athletes, 1 cr

PHED 1192, Strength, Agility and Quickness for Basketball Athletes, 1 cr

PHED 1193, Strength, Agility and Quickness for Wrestling Athletes, 1 cr

PHED 1194, Strength, Agility and Quickness for Baseball and Softball Athletes, 1 cr

PHED 2155, Introduction to Kinesiology, 3 cr

PHED 2241, Essentials of Personal Training, 3 cr

PHED 2245, Group Fitness/Personal Trainer Certification Exam Prep, 2 cr

PHED 2252, Sport Psychology, 3 cr

PHED 2253, Sport Nutrition for Performance, 3 cr



# RCTC PROGRAM PLAN

REC 2210, Recreation Program Leadership, 3 cr

**TOTAL .....27 CREDITS**

**PROGRAM OUTCOMES:**

Upon completion of the Group Fitness Instructor program at RCTC, students will achieve the following outcomes:

- Demonstrate effective professional communication skills with clients and professional networks.
- Apply critical thinking skills in program planning and development, and perform responsible decision making in ethical and legal situations.
- Develop fitness prescriptions for both individual and group clients based on their abilities, goals, and motivations.
- Describe the characteristics, structure, and function of human anatomy, as well as, the understanding of basic exercise physiology, and prevention and care of sports injuries.
- Identify the many certification tools available throughout the fitness industry for continued improvement, re-certification and expansion with industry trends.

Revised: 05/08/2018

Implementation: Fall 2018

# RCTC PROGRAM PLAN

## HEALTH INFORMATION TECHNOLOGY

Associate of Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....minimum of 17 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....10 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr OR

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1109, Introduction to Professional and Technical Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 3: NATURAL SCIENCES.....4 CR**

BIOL 1107, Fundamentals of Anatomy and Physiology, 4 cr

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

PSYC 1611, Psychology of Adjustment, 3 cr OR

PSYC 2618, General Psychology, 4 cr

OR

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

PHIL 1135, Bioethics, 3 cr (**Recommended**)

### II. PROGRAM CORE REQUIREMENTS.....47 CREDITS

HCOP 1620, Medical Terminology for Health Professions, 3 cr

AOP 2350, Microsoft Business Applications, 3 cr

AOP 2870, Employment Strategies, 1 cr

HIMC 1800, Legal Aspects of Health Information, 3 cr

HIMC 1820, CPT Coding, 3 cr

HIMC 1840, Introduction to Health Records, 3 cr

HIMC 1850, Computerized Health Information, 3 cr

HIMC 1910, Reimbursement, 2 cr

HIMC 2010, ICD-10 - CM Coding, 4 cr

HIMC 2020, ICD-10 - PCS Coding, 3 cr

HIMC 2030, Advanced Coding, 3 cr

HIMC 2600, Human Diseases for Health Professionals, 3 cr

HIMC 2610, Pharmacology, 2 cr

HIMC 2710, Healthcare Data Analysis, 3 cr

HIMC 2720, Quality Management of Health Information, 2 cr

HIMC 2820, Supervision of Health Information, 3 cr

HIMC 2830, HIT Review, 1 cr

HIMC 2870, HIT Capstone Experience, 2 cr

**TOTAL..... 64 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Health Information Technology program at RCTC, students will achieve the following outcomes:

- Maintain the accuracy and completeness of the electronic health record including intranet and internet applications as defined by organizational policy, accreditation, licensure, and external regulations and standards.
- Apply legal principles, policies, regulations and standards to protect the privacy, confidentiality, and security of health information.
- Code, classify, and index diagnoses and procedures for the purpose of reimbursement, standardization, retrieval and statistical analysis.
- Utilize principles of supervision and the tools used to effectively manage human resources, finances, and critical thinking.
- Apply techniques and tools for quality management and performance improvement including risk, utilization, and case management requirements.
- Demonstrate practical application of theories learned, including the ability to value self and work ethically with others in a diverse population, during the Professional Practice Experience.
- Use appropriate terminology in the areas of human anatomy, physiology, human diseases, and pharmacology when interpreting healthcare reports.

## **ADDITIONAL NOTES:**

The RCTC Health Information Technology program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

Upon completing the program students are eligible to take the national exam sponsored by the American Health Information Management Association (AHIMA) and earn the Registered Health Information Technician (RHIT) credential.

## **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in program activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15> Information about completing the background study will be available from program faculty.

Revised: 03/13/2024

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## HEALTH SCIENCES BROAD FIELD

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....47 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR

COMM 2100, Intercultural Communications, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

#### GOAL 3: NATURAL SCIENCES .....20 CR

BIOL 1217, Anatomy and Physiology I, 4 cr

BIOL 1218, Anatomy and Physiology II, 4 cr

BIOL 1220, General Biology I, 4 cr

BIOL 2021, General Microbiology, 4 cr

CHEM 1117, General, Organic and Biological Chemistry I, 4 cr

#### GOAL 4: MATHEMATICS/LOGICAL REASONING.....7 CR

MATH 1115, College Algebra, 3 cr

MATH 2208, Fundamentals of Statistics, 4 cr

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....10 CR

PSYC 2618, General Psychology, 4 cr

PSYC 2626, Human Growth and Development, 3 cr

SOC 1614, Introduction to Sociology, 3 cr

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR

PHIL 1135, Bioethics, 3 cr

### II. ADDITIONAL MNSTATE REQUIREMENTS.....3 CREDITS

BIOL 1211, Principles of Nutrition, 3 cr

### III. ELECTIVES (UNIVERSITY OF MINNESOTA ROCHESTER REQUIREMENTS).....10 CREDITS

HCOP 1610, Medical Terminology: Body Systems and Diseases, 2 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

HLTH 1110, CPR/AED for the Professional Rescuer (Health Care Provider), 1 cr

PHYS 1103, Principles of Physics, 3 cr

**TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Health Sciences Broad Field program at RCTC, students will achieve the following outcomes:

- Demonstrate an understanding of biological concepts and processes especially those related to the structure and function of the human body.
- Apply knowledge of social, psychological, and ethical theories to issues in the health sciences.
- Communicate effectively with diverse audiences through written, verbal, and nonverbal means.
- Utilize fundamental concepts of critical thinking and mathematical reasoning to solve problems.

## **ADDITIONAL NOTES:**

**PURPOSE:** This general, introductory program in health sciences prepares individuals for transfer to a variety of baccalaureate degree programs. It includes instruction in the basic sciences and aspects of subject matter related to various health occupations.

Revised: 11/13/2018

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## HEALTHCARE INFORMATICS

Diploma

### I. PROGRAM CORE REQUIREMENTS.....32 CREDITS

HCOP 1620, Medical Terminology for Health Professions, 3 cr

AOP 2614, Customer Service Skills and Concepts, 3 cr

BUS 2240, Project Management, 3 cr

COMP 1140, Introduction to Database and SQL, 3 cr

COMP 1150, Introduction to Computer Science, 3 cr

COMP 2243, Programming and Problem Solving, 4 cr

HIMC 1800, Legal Aspects of Health Information, 3 cr

HIMC 1840, Introduction to Health Records, 3 cr

HIMC 1850, Computerized Health Information, 3 cr

HIMC 2710, Healthcare Data Analysis, 3 cr

HIMC 2720, Quality Management of Health Information, 2 cr

### TOTAL .....32 CREDITS

#### **PROGRAM OUTCOMES:**

Upon completion of the Healthcare Informatics program at RCTC, students will achieve the following outcomes:

- Maintain the accuracy and completeness of the electronic health record including intranet and internet applications as defined by organizational policy, accreditation, licensure, and external regulations and standards.
- Apply legal principles, policies, regulations and standards to protect the privacy, confidentiality, and security of health information.
- Apply techniques and tools for quality management and performance improvement including risk, utilization, and case management requirements.
- Demonstrate practical application of theories learned, including the ability to value self and work ethically with others in a diverse population.
- Apply mathematical foundations, algorithmic principles, and computer science concepts to analyze and design software solutions.
- Develop logical reasoning and problem-solving skills to meet customer requirements/specifications for software solutions.
- Work as part of a professional team to analyze, design and implement software solutions.

#### **PROGRAM ENTRANCE REQUIREMENTS:**

To be admitted to the program, students must meet admission criteria and complete two (2) applications and return them to RCTC Admissions and Records:

RCTC Application for admission: <https://www.rctc.edu/admissions>

Program Application: <https://www.rctc.edu/program/hit/admission/>

Revised: 07/23/2018

Implementation: Fall 2018

# RCTC PROGRAM PLAN

## HEALTHCARE OFFICE PROFESSIONAL

Associate of Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS ..... 17 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION ..... 3-4 CR**

ENGL 1109, Introduction to Professional and Technical Communications, 3 cr OR

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 3: NATURAL SCIENCES ..... 4 CR**

BIOL 1107, Fundamentals of Anatomy and Physiology, 4 cr

**GOAL 7: HUMAN DIVERSITY ..... 3 CR**

**RECOMMEND:** COMM 1130, Interpersonal Communications, 3 cr

**GOAL 9: ETHICAL/CIVIC RESPONSIBILITY ..... 3 CR**

**RECOMMEND:** PHIL 1135, Bioethics, 3 cr

**MnTC ELECTIVES ..... 3-4 CR**

Credits chosen from courses meeting MnTC Goals 1-10.

### II. PROGRAM REQUIREMENTS ..... 34 CREDITS

AOP 2220, Business Communications, 3 cr

AOP 2350, Microcomputer Business Applications, 3 cr

AOP 2614, Customer Relations Management, 3 cr

AOP 2617, Microsoft Outlook and Meeting Planning, 3 cr

AOP 2622, Multimedia and Collaborative Technology, 3 cr

AOP 2630, Emerging Technology, 3 cr

AOP 2870, Employment Strategies, 1 cr

HCOP 1620, Medical Terminology for Health Professions, 3 cr

HCOP 1630, Healthcare Office Fundamentals, 3 cr

HCOP 1640, Healthcare Office Documentation, 4 cr

HIMC 2600, Human Diseases for Health Professionals, 3 cr

HIMC 2610, Pharmacology, 2 cr

### III. ELECTIVES ..... 9 CREDITS

**TOTAL ..... 60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Healthcare Office Professional program at RCTC, students will achieve the following outcomes:

- Define and comprehend appropriate terminology in the area of pharmacology, pathophysiology, anatomy, and physiology in medical documents.
- Demonstrate the ability to correctly transcribe, proofread, and edit healthcare documents using correct English language and the proper rules of grammar, punctuation, and style.
- Demonstrate ability to accurately manage an electronic medical record.
- Demonstrate the administrative functions, operations, and dynamics of healthcare work environments in the role of a healthcare office professional.
- Exhibit critical thinking, ethical conduct, and professionalism in oral and written communication in a medical office setting.

## **NOTES:**

**PURPOSE:** This program prepares students for employment in healthcare office environments. Employment opportunities may include medical administrative assistants, receptionists, appointment coordinators, medical transcriptionists, medical scribes, medical editors, medical secretary, pathology reporting specialists, health unit coordinators, and healthcare documentation specialists. Healthcare office professionals may provide support to patients, physicians, nurse practitioners, physician assistants, and surgeons in hospitals, clinics, or medical offices. Extensive training is provided in medical terminology, healthcare documentation, and office technology and fundamentals. Students will learn how diseases affect the body and which medications and other treatments are used to treat illnesses.

**KEYBOARDING PREREQUISITE:** Students entering this program must be proficient in keyboarding skills at a minimum of 35 net wpm. Students not meeting this requirement should enroll in AOP 1020, Keyboarding I. Words per minute will be assessed within the first week of enrollment in AOP 1030 Keyboarding II.

Revised: 2/14/2023

Implementation: Fall 2023



# RCTC PROGRAM PLAN

## HEALTHCARE OFFICE PROFESSIONAL

### Certificate

- I. MINNESOTA TRANSFER CURRICULUM (MNTC)/  
GENERAL EDUCATION REQUIREMENTS.....3 CREDITS**  
ENGL 1109, Introduction to Professional and Technical Communication, 3 cr (MNTC Goal 1) **OR**  
ENGL 1117, Reading and Writing Critically I, 4 cr (MNTC Goal 1)
- II. CORE PROGRAM REQUIREMENTS.....15 CREDITS**  
AOP 2614, Customer Relations Management, 3 cr  
AOP 2617, Microsoft Outlook and Meeting Planning, 3 cr  
AOP 2350, Microcomputer Business Applications, 3 cr  
AOP 2870, Employment Strategies, 1 cr  
HCOP 1620, Medical Terminology for Health Professions, 3 cr  
HCOP 1630, Healthcare Office Fundamentals, 3 cr  
HCOP 1640, Healthcare Office Documentation, 4 cr
- TOTAL .....23 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Healthcare Office Professional program at RCTC, students will achieve the following outcomes:

- Define and comprehend appropriate terminology in the area of pharmacology, pathophysiology, anatomy, and physiology in medical documents.
- Demonstrate the ability to correctly transcribe, proofread, and edit healthcare documents using correct English language and the proper rules of grammar, punctuation, and style.
- Demonstrate ability to accurately manage an electronic medical record.
- Demonstrate the administrative functions, operations, and dynamics of healthcare work environments in the role of a healthcare office professional.
- Exhibit critical thinking, ethical conduct, and professionalism in oral and written communication in a medical office setting.

### **ADDITIONAL NOTES:**

**PURPOSE:** This program prepares students for employment in healthcare office environments. Employment opportunities may include medical administrative assistants, receptionists, appointment coordinators, medical transcriptionists, medical scribes, medical editors, medical secretary, pathology reporting specialists, health unit coordinators, and healthcare documentation specialists. Healthcare office professionals may provide support to patients, physicians, nurse practitioners, physician assistants, and surgeons in hospitals, clinics, or medical offices. Extensive training is provided in medical terminology, healthcare documentation, and office technology and fundamentals. Students will learn how diseases affect the body and which medications and other treatments are used to treat illnesses.

Revised: 02/14/2023

Implementation: Fall 2023

# RCTC PROGRAM PLAN

## HISTORY TRANSFER PATHWAY

Associate of Arts

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS..... minimum of 45 CREDITS**

**GOAL 1: COMMUNICATION .....11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

**GOAL 2: is fulfilled when all other MnTC goals for this plan are completed.**

**GOAL 3: NATURAL SCIENCES .....minimum of 6 CR**

A minimum of two courses with a lab from two different areas that meet MnTC Goal 3

*Recommended:* a course in Biology

**GOAL 4: MATHEMATICAL/LOGICAL REASONING..... minimum of 3 CR**

Credits from MnTC Goal 4

*Recommended:* MATH 2208, Fundamentals of Statistics, 4 cr **OR**

MATH 1090, Stat way Statistics II, 4 cr

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES minimum of 16 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 5

HIST 1624, U.S. History to 1864, 3 cr **OR**

HIST 1625, U.S. History from 1865 to Present, 3 cr

HIST 1617, World History to 1500, 3 cr **OR**

HIST 1618, World History Since 1500, 3 cr

HIST 1613, Western Civilization I: Ancient Times to 1715, 3 cr **OR**

HIST 1614, Western Civilization II: The Modern Age 1715-Present, 3 cr

One additional course to complete a sequence, 3 cr

Acceptable sequences include:

- HIST 1624, U.S. History to 1865 & HIST 1625, U.S. History from 1865 to Present
- HIST 1617, World History to 1500 & HIST 1618, World History Since 1500
- HIST 1613, Western Civilization I & HIST 1614 Western Civilization II

**GOAL 6: THE HUMANITIES AND FINE ARTS .....minimum of 9 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 6

*Recommended:* a course in Philosophy

Two credits from each of the following:

**Goal 7: Human Diversity**

To be met by a course taken in Goal 3, 5, or 6

# RCTC PROGRAM PLAN

## **Goal 8: Global Perspective**

To be met by a course taken in Goal 3, 5, or 6

## **Goal 9: Ethic & Civic Responsibility**

To be met by a course taken in Goal 3, 5, or 6

## **Goal 10: People & Environment**

To be met by a course taken in Goal 3, 5, or 6

## **II. FIRST YEAR EXPERIENCE.....0-1 CREDIT\***

FYEX 1000, College Success Strategies, 1 cr

\*Students entering RCTC with less than 12 credits at the time of admission and pursuing an RCTC Associate of Arts degree are required to take FYEX 1000, College Success Strategies.

## **III. HEALTH AND PHYSICAL EDUCATION REQUIREMENTS..... 3 CREDITS**

Any combination of Health courses (numbered 1102, 1109, 1110, 1111, 1114, 1132, 1135, 2126) and/or Physical Education courses (numbered 1100-1199). 1 credit may be from Varsity Athletics (PHED 1210-1236; PHED 2210-2236).

## **IV. ELECTIVES..... 0-12 CREDITS**

Any course numbered above 1000 as needed to achieve a total of 60 credits.

## **TOTAL .....60 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the History Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Examine social, political, technological, cultural, and/or religious institutions or processes across a range of time periods of history.
- Develop and communicate explanations for historical events and their connection to contemporary society and issues.
- Employ the methods and data that historians use to discuss the human condition.
- Develop and communicate the results of historical events and their impact on contemporary society and issues.

### **ADDITIONAL NOTES:**

**PURPOSE:** The History Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated History bachelor's degree programs at Minnesota State universities.

The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities\* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

\*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

# RCTC PROGRAM PLAN

This transfer pathway degree will transfer to the following designated baccalaureate degree majors:

At Bemidji State University:

History, BA

History, BS

At Metropolitan State University:

History, BA

At Minnesota State University, Mankato:

History, BA

History, BS

At Minnesota State University, Moorhead:

History, BA

At Southwest Minnesota State University:

History, BA

At St. Cloud State University:

History, BA

At Winona State University:

History, BA

11/12/2019

Implementation: Fall 2020

# RCTC PROGRAM PLAN

## HISTOLOGY TECHNICIAN

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....30 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR

ENGL 1109, Introduction to Professional and Technical Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

#### GOAL 3: NATURAL SCIENCES .....12 CR

BIOL 1217, Anatomy and Physiology I, 4 cr

BIOL 1218, Anatomy and Physiology II, 4 cr

CHEM 1117, General, Organic and Biological Chemistry I, 4 cr OR

CHEM 1127, Chemical Principles I, 4 cr

#### GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 CR

MATH 1115, College Algebra, 3 cr

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....4 CR

PSYC 2618, General Psychology, 4 cr

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR

PHIL 1135, Bioethics, 3 cr (**Recommended**) OR

PHIL 1125, Ethics, 3 cr

#### MnTC General Education Electives.....1 CR

Credits chosen from courses meeting MnTC competencies in Goal areas 1-10

### II. PROGRAM CORE REQUIREMENTS.....30 CREDITS

HCOP 1610, Medical Terminology: Body Systems and Diseases, 2 cr

CHEM 1118, General, Organic and Biological Chemistry II, 4 cr OR

CHEM 1128, Chemical Principles, 4 cr

CONSORTIUM, Histology Tech core curriculum transfer, 24 cr

#### TOTAL .....60 CREDITS

# RCTC PROGRAM PLAN

## PROGRAM OUTCOMES:

Upon completion of the Histology Technician program at RCTC, students will achieve the following outcomes:

- Critically examine the foundational concepts, theories and frameworks of histology.
- Troubleshoot errors in histology through systematic reasoning and problem resolution.
- Correlate tissue identification with function and related pathology.
- Analyze tissue structures for quality based on histological technique and staining method.
- Describe the principles of electron microscopy, enzyme histochemistry, immunohistochemistry, and cytology preparation.
- Practice the principles of safety within the laboratory setting.
- Demonstrate the ability to manipulate the tools appropriate for histotechnology.
- Master entry level technical aptitude in all routine histological procedures.
- Evaluate problems for source, cause and potential resolution.
- Apply quality assurance measures to histology processes and procedures.
- Assess the quality of patient samples for accuracy and precision.
- Demonstrate efficiency and timely completion of assigned responsibilities.
- Practice professional conduct and interpersonal communication skills.
- Demonstrate the ethical role and responsibilities of a professional histology technician.
- Practice critical thinking through sound judgment and decision making.
- Develop professional skills as a function of personal growth.
- Practice respect and concern for patient well-being (the needs of the patient come first).

Revised: 11/13/2018

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## HOSPITALITY MANAGEMENT

Certificate

<b>I. PROGRAM CORE REQUIREMENTS.....</b>	<b>12 CREDITS</b>
BUS 2507, Operations and Guest Service Management, 3 cr	
BUS 2508, Sales Management and Analytics, 3 cr	
BUS 2509, Hospitality Revenue Generation Strategies, 3 cr	
BUS 2235, Organizational Dynamics, 3 cr	

**TOTAL ..... 12 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Hospitality Management certificate program at RCTC, students will achieve the following outcomes:

- Demonstrate ability to manage and coordinate staff and operations in various hotel departments.
- Apply a working knowledge of sales within the digital ecosystem.
- Prepare for the Google Analytics Certification.
- Demonstrate knowledge of the functions and roles of revenue and e-commerce managers in the hospitality industry.
- Identify and analyze factors that influence organizational dynamics including leadership, teamwork, interpersonal skills, and respect for diversity.

### **ADDITIONAL NOTES:**

**PURPOSE:** The Hospitality Management certificate is designed to provide practical applications of skills necessary for management in a variety of hospitality related fields. This certificate is designed to provide opportunities for students to implement and test the skills they learn. Students will also receive instructions to prepare them for the Google Analytics Certification.

Implementation: Spring 2024

# RCTC PROGRAM PLAN

## INDIVIDUALIZED STUDIES

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....30 CREDITS**

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 3: NATURAL SCIENCES**

Credits from MnTC Goal 3

**OR**

**GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 CR**

Credits from MnTC Goal 4

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

Credits from MnTC Goal 5

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

Credits from MnTC Goal 6

**MnTC GENERAL EDUCATION ELECTIVES.....14 CR**

Select any MnTC approved courses from the above areas.

**Career Exploration.....0-1 CREDITS**

CAOR 1103, Career Exploration Seminar, 1 cr **OR** Approved waiver

**ELECTIVES.....29-30 CREDITS**

Any RCTC courses numbered above 1000 and in approved degree plan

**TOTAL .....60 CREDITS**

### **ADDITIONAL NOTES:**

**PURPOSE:** The Individualized Studies AS Degree is designed for students who have well-defined career goals but need some flexibility to accomplish them. The program is intended to provide students with the opportunity to develop specific competencies, including a strong liberal arts background, and earn a degree not available through existing RCTC programs. Students who have technical diplomas, credit for prior learning, or partially completed degrees may find this an expedited pathway to degree completion. A separate application for admission to this program is required. Students must meet with an RCTC advisor or counselor to identify their individualized study plan. Final approval is granted by the RCTC Transfer Specialist.

Revised: 11/13/2018; Implementation: Spring 2019



# RCTC PROGRAM PLAN

## INFORMATION TECHNOLOGY

Associate in Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....20 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....8 CR**

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

**GOAL 4: MATH.....3 CR**

MATH 1115, College Algebra, 3 cr

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....9 CR**

GEOG 1614, Human Geography, 3 cr

ECON 1101, Introduction to Economics, 3 cr

POLS 1615, Introduction to American Government, 3cr

### II. PROGRAM CORE REQUIREMENTS.....28 CREDITS

COMP 1140, Into to Database & SQL, 3 cr

COMP 1150, Computer Science Concepts, 3 cr

COMP 1741, JavaScript, 3 cr

COMP 1751, Mobile Application Development, 3 cr

COMP 2243, Programming & Problem Solving, 4 cr

COMP 2247, Algorithms and Data Structure, 4 cr

DSCI 2253, Software Applications for Analyzing Data, 3 cr

DSCI 2257, Programming Libraries for Analyzing Data, 3 cr

COMP 2501, Capstone Course, 2 cr

### III. PROGRAM ELECTIVE COURSES.....12 CREDITS

Select courses from ACCT, ART, BUS, COMM, COMP, MATH, PHIL

For recommended electives see next page.

**TOTAL ..... 60 CREDITS**

**PROGRAM OUTCOMES:**

Upon completion of the Information Technology program at RCTC, students will achieve the following outcomes:

- Apply current technical practices in core information technologies.
- Identify effective solutions for organizations or individuals.
- Evaluate current and emerging technologies.
- Demonstrate independent problem-solving skills.

**RECOMMENDED ELECTIVES:**

ACCT 2217, Principles of Accounting I, 4 cr  
 ART 1120, Computer as Creative Media (MnTC 6), 3 cr  
 BUS 2240, Project Management, 3 cr  
 BUS 1144, Entrepreneurship, 3 cr  
 BUS 2143, Social Media Management Strategies, 3 cr  
 BUS 2150, Global Business, 3 cr  
 BUS 2202, Consumer Promotion and Digital Marketing, 3 cr  
 COMM 1000, Introduction to Workplace Communication, 3 cr  
 COMM 1114, Fundamentals of Public Speaking, 3 cr  
 COMM 1130, Interpersonal Communication (MnTC 1, 7), 3 cr  
 COMM 1337, Social Media (MnTC 5), 3 cr  
 COMM 2100, Intercultural Communication (MnTC 1, 8), 3 cr  
 COMM 2130, Team/Small Group Communication (MnTC 1), 3 cr  
 COMP 2275, Computer Architecture, 4 cr  
 MATH 1117, Pre-Calculus (MnTC 4), 4 cr  
 MATH 2208, Fundamentals of Statistics (MnTC 4), 4 cr  
 MATH 2218, Discrete Mathematics, 4 cr  
 PHIL 1125, Ethics (MnTC 6, 9), 3 cr  
 PHIL 2130, Business Ethics (MnTC 6, 9), 3 cr

Revised: 01/09/2024

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## LABORATORY SCIENCE

Associate in Science

### I. MINNESOTA TRANSFER CURRICULUM (MNTC)

#### GENERAL EDUCATION REQUIREMENTS.....31 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....10 CR

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1109, Introduction to Professional and Technical Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

(ENGL 1118, Reading and Writing Critically II, 4 cr may be substituted for ENGL 1109)

#### GOAL 3: NATURAL SCIENCES .....8 CR

BIOL 1220, General Biology I, 4 cr

CHEM 1127, Chemical Principles I, 4 cr

#### GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 CR

MATH 1115, College Algebra, 3 cr

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....7 CR

PSYC 2618, General Psychology, 4 cr

SOC 1614, Introduction to Sociology, 3 cr

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR

PHIL 1135, Bioethics, 3 cr

### II. PROGRAM CORE REQUIREMENTS.....29 CREDITS

BIOL 1217, Anatomy and Physiology I, 4 cr

BIOL 1218, Anatomy and Physiology II, 4 cr

BIOL 1230, General Biology II, 4 cr **OR**

BIOL 2020, Introduction to Molecular Biology Methods, 4 cr

BIOL 2021, Microbiology, 4 cr

CHEM 1118, General, Organic and Biological Chemistry II, 4 cr **OR**

CHEM 2800, Biochemistry, 3 cr

CHEM 1128, Chemical Principles, 4 cr

CHEM 2100, Survey of Organic Chemistry, 4 cr

BIOL 1200, Introduction to the Clinical/Research Laboratory, 2 cr

### TOTAL .....60 CREDITS

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Laboratory Science program at RCTC, students will achieve the following outcomes:

- Explain and properly apply the scientific method by developing valid hypotheses, designing experiments, gathering relevant data using current technology, and interpreting quantitative and qualitative data.
- Prepare written and oral scientific communications that use tables and graphs to report results, that describe detailed experimental procedures, and that clearly explain conclusions.
- Critically evaluate contributions to science reported in all forms of media; and be able to identify valid approaches to scientific problem solving and reporting.
- Exhibit growth in academic performance and personal and professional responsibility.
- Demonstrate basic laboratory skills, such as making accurate and precise measurements, using a microscope, preparing solutions, operating current instrumentation, and preparing samples for various analyses.
- Exhibit an ability to work independently and collaboratively.

## **ADDITIONAL NOTES:**

**PROGRAM ARTICULATION:** This program is articulated with the Bachelor of Science degree in Medical Laboratory Science offered by the University of North Dakota. Students who complete this program can continue next two years of study at UND and receive a Bachelor of Science degree in MLS.

Revised: 11/12/2020

Implementation: Fall 2020

# RCTC PROGRAM PLAN

## LIBERAL ARTS AND SCIENCES

Associate of Arts

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....40 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION ..... 11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr OR

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

**GOAL 2: is fulfilled when all other MnTC goals for this plan are completed.**

**GOAL 3: NATURAL SCIENCES ..... minimum of 6 CR**

A minimum of two courses with a lab from two different areas that meet MnTC Goal 3

**GOAL 4: MATHEMATICAL/LOGICAL REASONING ..... minimum of 3 CR**

Credits from MnTC Goal 4

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES..... minimum of 9 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 5

**GOAL 6: THE HUMANITIES AND FINE ARTS ..... minimum of 9 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 6

**Goals 7, 8, 9, 10: Two credits from each of the following areas:**

**GOAL 7: HUMAN DIVERSITY**

**GOAL 8: GLOBAL PERSPECTIVE**

**GOAL 9: ETHICAL & CIVIC RESPONSIBILITY**

**GOAL 10: PEOPLE & THE ENVIRONMENT**

**II. FIRST YEAR EXPERIENCE ..... 1 CREDIT\***

FYEX 1000, College Success Strategies, 1 cr

\*Students entering RCTC with less than 12 college credits at the time of admission and pursuing an RCTC Associate of Arts degree are required to take FYEX 1000, College Success Strategies.

**III. HEALTH AND PHYSICAL EDUCATION REQUIREMENTS .....3 CREDITS**

Any combination of Health courses (numbered 1102, 1109, 1110, 1111, 1114, 1132, 1135, 2126)

and/or Physical Education courses (numbered 1100-1199). 1 credit may be from Varsity Athletics (PHED 1210-1236; PHED 2210-2236).

**IV. ELECTIVES: Any course numbered above 1000.....16-17 CREDITS**

**TOTAL.....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Liberal Arts and Sciences program at RCTC, students will achieve the following outcomes:

- Demonstrate personal accountability for wellness and educational planning.
- Utilize fundamental concepts of critical thinking to solve problems.
- Demonstrate competences in all forms of communication.
- Synthesize knowledge of attitudes, behaviors, languages, and skills from diverse perspectives.
- Recognize how aesthetics and the arts contribute to the human experience.

Revised: 11/13/2018

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## MASS COMMUNICATION CERTIFICATE

Certificate

### I. PROGRAM CORE REQUIREMENTS.....24 CREDITS

- ART 1290, Media Arts, 3 cr
- COMM 1337, Social Media, 3 cr
- COMM 2130, Team/Group Communication, 3 cr
- COMM 1110, Introduction to Mass Communication, 3 cr
- MCOM 1190, TV/Media Production, 3 cr
- MCOM 1245, Writing for Mass Media, 3 cr
- MCOM 2294, Internship, 3 cr
- POLS 1615, Introduction to American Government, 3 cr

**TOTAL.....24 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Mass Communication program at RCTC, students will achieve the following outcomes:

- Apply research methods to address a range of media practices.
- Evaluate mass communication methods and originally produced content.
- Create media content that demonstrates the principles and practices of media aesthetics.
- Exhibit professionalism, collaboration and ethical behavior consistent with mass communications standards.

### **ADDITIONAL NOTES:**

**PURPOSE:** The Mass Communication Certificate is designed for students to gain the entry-level knowledge and skills necessary to become a mass media communicator in today's modern media society. This certificate program will provide hands-on experience needed to be successful in this multi-platform storytelling field. You'll have the opportunity to gain digital audio/ visual and multimedia skills that will help you produce broadcast quality programming as well as social media content, while working both independently and collaboratively. Coursework will provide the foundational skills to enter the workforce for a career in television, radio, print, web, social and digital media, public relations or advertising.

Revised: 09/25/2018

Implementation: Fall 2018

# RCTC PROGRAM PLAN

## MASS COMMUNICATION TRANSFER PATHWAY

Associate of Arts

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....MINIMUM of 41 CREDITS**

**Note that a course may meet more than one MnTC Goal requirement but its credits are only counted towards the degree once.**

**GOAL 1: COMMUNICATION .....11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

**GOAL 2 is fulfilled when all other MnTC goals for this plan are completed.**

**GOAL 3: NATURAL SCIENCES .....minimum of 6 CR**

A minimum of two courses with a lab from two different areas that meet MnTC Goal 3.

Recommend that at least one of the courses also meet Goal 10.

**GOAL 4: MATHEMATICAL/LOGICAL REASONING..... minimum of 3 CR**

Any course that meets MnTC Goal 4

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES ....minimum of 9 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 5

*Recommended:* POLS 1615, Introduction to American Government, 3 cr

COMM 1337, Social Media, 3 cr

**GOAL 6: THE HUMANITIES AND FINE ARTS .....minimum of 9 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 6

ART 1290, Media Arts, 3 cr

**Goal 7: HUMAN DIVERSITY**

**To be met by a course taken in Goal 3, 5, or 6.**

**Goal 8: GLOBAL PERSPECTIVE**

**To be met by a course taken in Goal 3, 5, or 6.**

**Goal 9: Ethic & Civic Responsibility.....3 CR**

COMM 1110, Introduction to Mass Communication, 3 cr

**Goal 10: People & Environment**

**To be met by a course taken in Goal 3, 5, or 6.**



# RCTC PROGRAM PLAN

- II. FIRST YEAR EXPERIENCE.....0-1 CREDIT\***  
 FYEX 1000, College Success Strategies, 1 cr  
 \*Students entering RCTC with less than 12 credits at the time of admission and pursuing an RCTC Associate of Arts degree are required to take FYEX 1000, College Success Strategies.
- III. HEALTH AND PHYSICAL EDUCATION REQUIREMENTS..... 3 CREDITS**  
 Any combination of Health courses (numbered 1102, 1109, 1110, 1111, 1114, 1132, 1135, 2126) and/or Physical Education courses (numbered 1100-1199). 1 credit may be from Varsity Athletics (PHED 1210-1236; PHED 2210-2236).
- IV. PROGRAM REQUIREMENTS.....13-15 CREDITS**  
 COMM 2130: Team/Group Communication, 3 cr  
 MCOM 1190: TV/Media Production, 3 cr  
 MCOM 1245: Writing for Mass Media, 3 cr  
 MCOM 2210: Introduction to Public Relations, 3 cr  
 MCOM 2294: Internship, 1-3 cr
- V. ELECTIVES.....0-3 CREDITS**  
 Any course numbered above 1000
- TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Mass Communication program at RCTC, students will achieve the following outcomes:

- Apply research methods to address a range of media practices.
- Evaluate mass communication methods and originally produced content.
- Create media content that demonstrates the principles and practices of media aesthetics.
- Exhibit professionalism, collaboration and ethical behavior consistent with mass communications standards.

## **ADDITIONAL NOTES:**

The Mass Communication Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated Mass Communication bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities\* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

\*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

This transfer pathway degree will transfer to the following designated baccalaureate degree majors: Winona State University, Mass Communications, BA.

Revised: 11/13/2018

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## MATHEMATICS TRANSFER PATHWAY

Associate of Arts

- I. MINNESOTA TRANSFER CURRICULUM (MnTC)/**  
**GENERAL EDUCATION REQUIREMENTS .....40 CREDITS**
- GOAL 1: WRITTEN AND ORAL COMMUNICATION ..... 11 CR**  
 COMM 1114, Fundamentals of Public Speaking, 3 cr OR  
 COMM 1130, Interpersonal Communication, 3 cr  
 ENGL 1117, Reading and Writing Critically I, 4 cr  
 ENGL 1118, Reading and Writing Critically II, 4 cr
- GOAL 2: Is fulfilled when all other MnTC goals for this plan are completed.**
- GOAL 3: NATURAL SCIENCES ..... minimum of 6 CR**  
 A minimum of two courses with a lab from two different areas that meet MnTC Goal 3
- GOAL 4: MATH..... 5 CR**  
 MATH 1127, Calculus I, 5 cr
- GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES.... minimum of 9 CR**  
 A minimum of two credits from each of three different areas that meet MnTC Goal 5
- GOAL 6: THE HUMANITIES AND FINE ARTS ..... minimum of 9 CR**  
 A minimum of two credits from each of three different areas that meet MnTC Goal 6
- GOAL 7, 8, 9, 10: Two credits from each of the following areas:**  
 (Many courses from Goals 1 – 6 also meet Goals 7 – 10.)  
**GOAL 7: HUMAN DIVERSITY**  
**GOAL 8: GLOBAL PERSPECTIVE**  
**GOAL 9: ETHICAL & CIVIC RESPONSIBILITY**  
**GOAL 10: PEOPLE & THE ENVIRONMENT**
- II. PROGRAM CORE REQUIREMENTS .....15 CREDITS**  
 MATH 1128, Calculus II, 5 cr  
 MATH 2237, Multivariable and Vector Calculus, 5 cr  
 MATH 2238, Differential Equations and Linear Algebra, 5 cr
- III. PROGRAM ELECTIVE COURSES .....5 CREDITS**  
 COMP 2243, Programming and Problem Solving, 4 cr  
 MATH 2218, Discrete Mathematics, 4 cr  
 MATH 2350, Introduction to Mathematical Statistics, 4 cr  
 FYEX 1000, College Success Strategies, 1cr  
 PHYS 1128, Classical Physics II, 5 cr
- TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Mathematics Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Demonstrate both a conceptual and operational understanding of single and multivariable Calculus.
- Select an appropriate mathematical method to solve complex problems and provide appropriate justification for their reasoning.
- Demonstrate proficiency in utilizing multiple approaches for solving problems that include analytical, numerical, and graphical solution methods.

## **ADDITIONAL NOTES:**

The Mathematics Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated Mathematics bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities\* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field. \*Universities within the Minnesota State system include the universities listed below.

Students should consult with their advisor to select the appropriate program electives based off the university they plan to attend. The following are elective recommendations for the given universities:

Bemidji State University:

Students are encouraged to take and transfer in Differential Equations.

Metropolitan State University:

Students are encouraged to take and transfer in Introduction to Mathematical Statistics, Physics I with Calculus, or Computer Programming I.

Minnesota State University, Mankato:

A minor is required. Students are encouraged to take at least one course that will apply to their intended minor. A list of minors and their requirements are listed in the Minnesota State University's Mankato's catalog. Any minor may be chosen.

Minnesota State University, Moorhead:

A Computer Programming course is required

Southwest Minnesota State University:

No Recommendations

St. Cloud State University:

A computer programming course and a minor in specific area are required. A list of acceptable minors can be found in the University Catalog. Students are encouraged to take at least one course that applies to their intended minor.

Winona State University

Students are encouraged to take and transfer in the following courses: Linear Algebra, Discrete Mathematics, and an Introduction to Mathematical Statistics. A minor is required so progress towards the minor should begin at the college level.

Revised: 12/13/2022

Implemented: Fall 2023

# RCTC PROGRAM PLAN

## MAGNETIC RESONANCE IMAGING (MRI)

Associate of Applied Science

*An Affiliated Program with the Mayo Clinic School of Health Sciences*

### I. MINNESOTA TRANSFER CURRICULUM (MNTC)/

**GENERAL EDUCATION REQUIREMENTS.....28 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION.....7 CR**

ENGL 1117, Reading and Writing Critically I, 4 cr

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

**GOAL 3: NATURAL SCIENCES.....15 CR**

BIOL 1217, Anatomy and Physiology I, 4 cr

BIOL 1218, Anatomy and Physiology I, 4 cr

CHEM 1117, General, Organic, and Biological Chemistry, 4 cr

PHYS 1103, Principles of Physics, 3 cr

**GOAL 4: MATHEMATICAL/LOGICAL REASONING.....3 CR**

MATH 1115, College Algebra, 3 cr

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY.....3 CR**

**RECOMMENDED:**

PHIL 1125, Ethics, 3 cr **OR**

PHIL 1135, Bioethics, 3 cr

**II. PROGRAM CORE REQUIREMENTS.....35 CREDITS**

*The following courses are offered through the Mayo Clinic School of Health Sciences:*

MRI 2201, MRI Physics I, 2 cr

MRI 2202, MRI Physics II, 2 cr

MRI 2230, Introduction to Clinical Magnetic Resonance Imaging, 2 cr

MRI 2270, MRI Safety, 3 cr

MRI 2301, MRI Procedures I, 4 cr

MRI 2302, MRI Procedures II, 4 cr

MRI 2315, Medical Informatics, 1 cr

MRI 2360, Fundamentals of Imaging Sciences and Health Care, 1 cr

MRI 2450, Advanced Imaging Procedures, 1 cr

MRI 2501, Clinical Practicum I, 5 cr

MRI 2502, Clinical Practicum II, 8 cr

MRI 2570, MRI Registry Review, 2 cr

**TOTAL.....63 CREDITS**

# RCTC PROGRAM PLAN

## PROGRAM OUTCOMES:

Upon completion of the MRI program at RCTC, students will achieve the following outcomes:

- Demonstrate professional behavior in the clinical setting.
- Demonstrate knowledge of professional attributes.
- Demonstrate clinical competence in producing images of diagnostic quality.
- Assess the quality of images.
- Demonstrate effective verbal communication skills.
- Demonstrate effective written communication skills.

## ADDITIONAL INFORMATION:

Magnetic Resonance Imaging (MRI) is an advancing medical imaging field that uses powerful magnetic fields and radio waves to create highly detailed images of the human body. MR technologists are valued members of the health care team and have direct patient contact in clinic and hospital settings. MR technologists are vital in the creation of images for diagnosis and treatment of a variety of medical conditions. They are responsible for positioning the patient, selecting appropriate equipment and setting technical parameters to accurately display anatomy and pathology. In addition to technical expertise, MR technologists also possess excellent communication skills as they are responsible for patient education, instruction and safety.

The MRI Program is designed to provide high-quality didactic and clinical education experiences for students to acquire the knowledge, skills and attitudes necessary to be well-rounded, fully competent MR technologists.

Graduates who obtain a certificate in Magnetic Resonance Imaging and Associate Degree are eligible to take the Magnetic Resonance Imaging certification examination administered by the American Registry of Radiologic Technologists (ARRT). Successfully passing the ARRT Primary MRI Certification Exam will earn graduates the nationally recognized credentials of R.T.(MR).

Revised: 03/05/2020

Implementation: Fall 2020

# RCTC PROGRAM PLAN

## MUSIC CREATIVE TECHNOLOGIES

Associate of Fine Arts

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### **GENERAL EDUCATION REQUIREMENTS.....33 CREDITS**

*Complete at least 33 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### **GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr  
ENGL 1117, Reading and Writing Critically I, 4 cr

#### **GOAL 3: NATURAL SCIENCES .....3 CR**

Credits from MnTC Goal 3

#### **GOAL 4: MATHEMATICS/LOGICAL REASONING .....3 CR**

Credits from MnTC Goal 4

#### **GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

Credits from MnTC Goal 5

#### **GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....14 CR**

MUSC 1001, Music Fundamentals, 3 cr

Select 4 cr from the following:

MUSC 1301, Concert Choir, 1 cr

MUSC 1302, Concert Band, 1 cr

MUSC 1321, Aires, 1 cr

MUSC 1322, Jazz Band, 1 cr

MUSC 1340, World Drum Ensemble, 1 cr

MUSC 1401, Beginning Class Piano, 3 cr

MUSC 1501, Musicianship I, 4 cr

#### **GOAL 8: GLOBAL PERSPECTIVE.....3 CR**

MUSC 1231, Introduction to World Music, 3 cr

### II. PROGRAM CORE REQUIREMENTS.....18 CREDITS

MUSC 1005, Live Sound Production, 3 cr

MUSC 1460, Piano Lessons, 1 cr

MUSC 1502, Musicianship II, 4 cr

MUSC 1621, Audio Production I, 3 cr

MUSC 1622, Audio Production II, 3 cr

# RCTC PROGRAM PLAN

Select 4 cr of your Primary Instrument:

MUSC 1440, Guitar/Bass Lessons, 1 cr

MUSC 1450, Voice Lessons, 1 cr

MUSC 1470, Woodwind Lessons, 1 cr

MUSC 1480, Brass Lessons, 1 cr

MUSC 1490, Percussion Lessons, 1 cr

## **ELECTIVES.....9 CREDITS**

*Choose a minimum of 9 credits from courses below:*

MUSC 1002, Music, Video, Lights I, 3 cr

MUSC 1003, Music, Video, Lights II, 3 cr

MUSC 1421, Beginning Class Voice, 3 cr

MUSC 1431, Beginning Guitar Class, 3 cr

MUSC 1601, Electronic Music Composition I, 3 cr

MUSC 1602, Electronic Music Composition II, 2 cr

MUSC 2501, Musicianship III, 3 cr

MUSC 2502, Musicianship IV, 3 cr

MUSC 2601, Studio Problems, 1 cr

COMM 1110, Introduction to Mass Communication, 3 cr

## **TOTAL .....60 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Music Creative Technologies (AFA) program at RCTC, students will achieve the following outcomes:

- Demonstrate the ability to read and write musical notation on their primary instrument.
- Demonstrate an understanding of music from diverse time periods, belief systems, cultures, and genders.
- Perform music as a contributing member of a large and small ensemble and demonstrate the ability to prepare all aspects of performance.
- Create original music and media compositions in a wide range of genres using contemporary tools.
- Operate contemporary equipment for both live and studio settings incorporating musical concepts.

### **ADDITIONAL NOTES:**

**PURPOSE:** The purpose of the Music Creative Technologies Program is to provide the first two years of experience for transfer to many music institutions for careers which may include: (1) Recording Engineering, (2) Live Sound Engineer/Production, (3) Sound Design for TV, Film, and Video Games, (4) Music Production for TV, Film, and Video Games, (5) Audio Production for Live Sporting Events and Broadcast.

\*Universities within the Minnesota State system include Bemidji State University, Metropolitan State University, Minnesota State University – Mankato, Minnesota State University – Moorhead, Southwest Minnesota State University, St. Cloud State University, and Winona State University.



# RCTC PROGRAM PLAN

This AFA degree will transfer to the following designated baccalaureate degree majors:

Minnesota State University Moorhead:

Commercial Music, BS

Entertainment Industries and Technology, BS

Saint Mary's University of Minnesota:

Music Industry, BA

Revised: 02/18/2022

Implementation: Fall 2022

# RCTC PROGRAM PLAN

## MUSIC TECHNOLOGY

Certificate

### I. PROGRAM CORE REQUIREMENTS.....20 CREDITS

- MUSC 1002, Music, Video, Lights I, 3 cr
- MUSC 1003, Music, Video, Lights II, 3 cr
- MUSC 1005, Live Sound Production, 3 cr
- MUSC 1601, Electronic Music Composition I, 3 cr
- MUSC 1602, Electronic Music Composition II, 2 cr
- MUSC 1621, Audio Production I, 3 cr
- MUSC 1622, Audio Production II, 3 cr

**TOTAL .....20 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Music Technology certificate program at RCTC, students will achieve the following outcomes:

- Create original music and media compositions through the use of contemporary tools.
- Operate contemporary equipment for both live and studio settings incorporating musical concepts.

### **ADDITIONAL NOTES:**

**PURPOSE:** The purpose of this certificate is to give both the aspiring and professional music technology artist the core experience in contemporary music industry and technology applications. This certificate will lend further development for the practicing music technologist as an update for new applications in the Music Creative Technology field with respect to contemporary audio recording, MIDI application, and music composition.

This certificate is also a great access point to begin the Associate of Fine Arts (Two-Year) Music Creative Technologies.

Revised: 02/08/2022

Implementation: Fall 2022

# RCTC PROGRAM PLAN

## NURSING (A.D.)

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....30 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....4 CR

ENGL 1117, Reading and Writing Critically I, 4 cr

#### GOAL 3: NATURAL SCIENCES .....16 CR

BIOL 1217, Anatomy and Physiology I, 4 cr  
 BIOL 1218, Anatomy and Physiology II, 4 cr  
 BIOL 2021, General Microbiology, 4 cr  
 CHEM 1117, General, Organic and Biological Chemistry I, 4 cr

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....7 CR

PSYC 2618, General Psychology, 4 cr  
 SOC 1614, Introduction to Sociology, 3 cr

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR

PHIL 1135, Bioethics, 3 cr (**Recommended**) OR  
 PHIL 1125, Ethics, 3 cr

### II. PROGRAM CORE REQUIREMENTS.....34 CREDITS

NURS 1117, Fundamentals of Nursing, 6 cr  
 NURS 1118, Adult Nursing I, 6 cr  
 NURS 2217, Adult Nursing II, 6 cr  
 NURS 2207, Maternal Newborn Nursing, 3 cr  
 NURS 2208, Mental Health Nursing, 3 cr  
 NURS 2209, Pediatric Nursing, 3 cr  
 NURS 2218, Advanced Concepts in Nursing, 3 cr  
 NURS 2219, Leadership and Management in Nursing, 4 cr

#### TOTAL .....64 CREDITS

### PROGRAM OUTCOMES:

Upon completion of the Associate Degree Nursing program, students will achieve the following outcomes:

- Practice within the ethical and legal framework of the nursing profession. (Professionalism)
- Identify individual learning goals for personal and professional development within a changing healthcare environment. (Professionalism)
- Integrate evidence-based knowledge, clinical reasoning, and the nursing process to formulate safe nursing judgments when providing quality care. (Critical Thinking)

# RCTC PROGRAM PLAN

- Demonstrate an attitude of positive regard, respect for diversity, empathy, and integrity when providing relationship centered care. (Caring)
- Collaborate with the patient, family, and health care team utilizing evidence-based health information/informatics to achieve quality outcomes. (Collaboration)
- Perform nursing interventions safely for individuals and families in a variety of settings. (Nursing Interventions)

## **ADDITIONAL NOTES:**

**PURPOSE:** The associate degree nurse is prepared to practice nursing in situations involving direct patient care, most frequently in the hospital or long-term care facility. Graduates are prepared to function as defined in Minnesota statutes by (a) providing a nursing assessment of the community; (b) providing nursing care supportive to or restorative of life functions such as skilled ministrations of nursing care, supervising and teaching nursing personnel, health teaching and counseling, case finding and referral to other health resources; and (c) evaluating these actions. After successful completion of this program, which includes classes at RCTC and care of patients in the Mayo Foundation Hospitals in addition to area nursing homes and selected community agencies, graduates are eligible to apply to take the National Council Licensure Examination -Registered Nurse (NCLEX-RN).

The program is approved by the Minnesota Board of Nursing and is accredited by the Accreditation Commission for Education in Nursing, Inc., 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326 ([www.acenursing.org](http://www.acenursing.org)).

RCTC class hours are 50 minutes in length, 1 credit is a minimum of 16 hours of classroom contact. The College has an expectation that students spend two hours of preparatory work for every one hour in the classroom. Nursing clinical assignments are calculated on a ratio of 1:3. Three hours are spent in clinical work for every one credit. Science course labs are assigned two hours for one credit.

## **NURSING (A.D.) COURSE SEQUENCE:**

The Nursing Program is a four-semester course sequence, which begins both Fall and Spring Semester. Biology, Chemistry, English, Psychology, Sociology, and Philosophy (Humanities) courses may be taken prior to admission into the Nursing Program. Grade of C or better is required of all general education and nursing course requirements. All general education requirements may be taken through the Post-Secondary Enrollment Option Program (PSEOP).

### **Semester I**

NURS 1117, 6 cr  
 BIOL 1217, 4 cr  
 CHEM 1117, 4 cr  
 ENGL 1117, 4 cr  
**TOTAL 18 cr**

### **Semester II**

NURS 1118, 6 cr  
 BIOL 1218, 4 cr  
 BIOL 2021, 4 cr  
 PSYC 2618, 4 cr  
**TOTAL 18 cr**

# RCTC PROGRAM PLAN

## Semester III

NURS 2207 (8 wks), 3 cr

NURS 2208 (8 wks), 3 cr

NURS 2217, 6 cr

SOC 1614, 3 cr

**TOTAL** 15 cr

## Semester IV

NURS 2209 (8 wks), 3 cr

NURS 2218 (8 wks), 3 cr

NURS 2219 (8 wks), 4 cr

PHIL 1125/1135, 3 cr

**TOTAL** 13 cr

Upon successful completion of the program, students are eligible to apply for the National Council Licensure Examination – Registered Nurse (NCLEX-RN) and enter the profession of nursing as defined by Minnesota statutes (148.171 Subd. 15, Practice of Professional Nursing).

### **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Students in the program will also be required to complete a National Criminal background Study. Information about completing the background study will be available from program faculty.

Revised: 02/09/2021

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## PEACE OFFICER

Associate of Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/ GENERAL EDUCATION REQUIREMENTS.....19 CREDITS

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

#### GOAL 3: NATURAL SCIENCES

CHEM 1031, Introduction to Forensic Chemistry, 3 cr (**Recommended**) OR

Credits from MnTC Goal 3 OR

#### GOAL 4: MATHEMATICS/LOGICAL REASONING .....3 CR

Credits from MnTC Goal 4

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR

SOC 1614, Introduction to Sociology, 3 cr

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR

**Recommended:** HUM/SPAN 1001, Introduction to Hispanic Cultures, 3 cr OR

ART 1184, Photography, 3 cr OR

Credits from MnTC Goal 6

#### GOAL 7: HUMAN DIVERSITY .....3 CR

SOC 2625, Minority Group Relations, 3 cr

### II. PROGRAM CORE REQUIREMENTS.....28 CREDITS

POFC 1105, Introduction to Peace Officers and the Criminal Justice System, 3 cr

POFC 1112, Introduction to Criminal Investigations, 3 cr

POFC 1115, Basic Firearms, 2 cr

POFC 2119, Minnesota Criminal and Traffic Statutes, 3 cr

POFC 2121, Human Behavior and Ethics for Peace Officers, 3 cr

POFC 2125, Community Policing and Service, 3 cr

CRJU 2122, Criminal Procedure, 3 cr

CRJU 2127, Juvenile Law and Procedures, 3 cr

CRJU 2215, Homeland Security/Defense, 3 cr

EMC 1121, First Responder, 2 cr

### SKILLS Courses.....12 CREDITS

\*POFS 2101, Crime Scene Processing, 2 cr

\*POFS 2102, Traffic Enforcement, 3 cr

\*POFS 2103, Defensive Tactics, 2 cr

# RCTC PROGRAM PLAN

\*POFS 2104, Firearms for SKILLS, 2 cr

\*POFS 2105, Patrol Practical's , 3 cr

**\*Tuition differential associated with these courses**

### III. HEALTH AND PHYSICAL EDUCATION REQUIREMENTS.....1 CREDIT

Required: PHED 1189, Boot Camp, 1 cr

**TOTAL ..... 60 CREDITS**

#### **PROGRAM REQUIREMENTS:**

Grade of "C" or better is required of all general education and Peace Officer course requirements for graduation.

#### **PROGRAM OUTCOMES:**

Upon completion of the Peace Officer program at RCTC, students will achieve the following outcomes:

- Demonstrate an understanding of the Criminal Justice System and criminal procedure.
- Demonstrate an understanding of the current Juvenile Justice System.
- Demonstrate an understanding of the importance of ethics in law enforcement.
- Demonstrate an understanding of the Minnesota Criminal Statutes to satisfy POST Learning Objectives.

#### **ADDITIONAL NOTES:**

The Peace Officer - Associate in Applied Science degree satisfies requirements to become MN POST Board Exam eligible. Graduates seeking employment as a Peace Officer will be required to pass the POST exam to become eligible to be licensed as a Peace Officer in the State of Minnesota.

#### **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in program activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15> Information about completing the background study will be available from program faculty.

Revised: 3/16/23

Implementation: Fall 2023

# RCTC PROGRAM PLAN

## PEACE OFFICER/PUBLIC SAFETY TRANSFER PATHWAY

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....30 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....11 CR

ENGL 1117, Reading and Writing Critically I, 4 cr  
 ENGL 1118, Reading and Writing Critically II, 4 cr  
 COMM 1114, Fundamentals of Public Speaking, 3 cr OR  
 COMM 1130, Interpersonal Communication, 3 cr OR  
 COMM 2100, Intercultural Communication, 3 cr

#### GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 CR

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....6-7 CR

PSYC 1611, Psychology of Adjustment, 3 cr OR  
 PSYC 2618, General Psychology, 4 cr  
 SOC 1614, Introduction to Sociology, 3 cr

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR

PHIL 1125, Ethics, 3 cr

#### GOAL 7: HUMAN DIVERSITY.....3 CR

SOC 2625, Minority Group Relations, 3 cr

#### MnTC ELECTIVES.....3-4 CR

May be met by any MnTC Goal 3, 8, or 10 course  
 CHEM 1031, Introduction to Forensic Chemistry, 3 cr OR  
 HUM/SPAN 1001, Introduction to Hispanic Cultures, 3 cr OR  
 SPAN 1101, Beginning Spanish I, 4 cr

### II. PROGRAM REQUIREMENTS.....25 CREDITS

POFC 1105, Introduction to Peace Officers and the Criminal Justice System, 3 cr  
 POFC 1112, Introduction to Criminal Investigations, 3 cr  
 POFC 1115, Basic Firearms, 2 cr  
 POFC 2119, Minnesota Criminal and Traffic Statutes, 3 cr  
 POFC 2121, Human Behavior and Ethics for Peace Officers, 3 cr  
 POFC 2125, Community Policing and Service, 3 cr  
 CRJU 2122, Criminal Procedure, 3 cr  
 CRJU 2127, Juvenile Law and Procedures, 3 cr  
 EMC 1121, First Responder, 2 cr



# RCTC PROGRAM PLAN

## III. SKILLS courses.....12 CREDITS

- \*POFS 2101, Crime Scene Processing, 2 cr
- \*POFS 2102, Traffic Enforcement, 3 cr
- \*POFS 2103, Defensive Tactics, 2 cr
- \*POFS 2104, Firearms for SKILLS, 2 cr
- \*POFS 2105, Patrol Practical's, 3 cr
- \*Tuition differential associated with these courses

## IV. HEALTH AND PHYSICAL EDUCATION REQUIREMENTS.....1 CREDIT

Required: PHED 1189, Boot Camp, 1 cr

## TOTAL ..... 68 CREDITS

### PROGRAM REQUIREMENTS:

Grade of "C" or better is required of all general education and peace officer course requirements for graduation.

### PROGRAM OUTCOMES:

Upon completion of the Peace Officer program at RCTC, students will achieve the following outcomes:

- Demonstrate an understanding of the Criminal Justice System and criminal procedure.
- Demonstrate an understanding of the current Juvenile Justice System.
- Demonstrate an understanding of the importance of ethics in law enforcement.
- Demonstrate an understanding of the Minnesota Criminal Statutes to satisfy POST Learning Objectives.

### ADDITIONAL NOTES:

The Peace Officer/Public Safety Transfer Pathway offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated Peace Officer/Public Safety bachelor's degree programs at Minnesota State universities.\* The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

\*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University

### Notice of Minnesota Background Check Requirement

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Information about completing the background study will be available from program faculty.

Revised: 3/16/2023

Implementation: Fall 2023

# RCTC PROGRAM PLAN

## PEACE OFFICER

Certificate

### I. PROGRAM CORE REQUIREMENTS.....15 CREDITS

POFC 2119, Minnesota Criminal and Traffic Statutes, 3 cr  
 POFC 2121, Human Behavior and Ethics in Law Enforcement, 3 cr  
 POFC 2125, Community Policing and Service, 3 cr  
 CRJU 2122, Criminal Procedure, 3 cr  
 CRJU 2127, Juvenile Law and Procedures, 3 cr

### II. SKILLS COURSES.....12 CREDITS

\*POFS 2101, Crime Scene Processing, 2 cr  
 \*POFS 2102, Traffic Enforcement, 3 cr  
 \*POFS 2103, Defensive Tactics, 2 cr  
 \*POFS 2104, Firearms for SKILLS, 2 cr  
 \*POFS 2105, Patrol Practicals, 3 cr  
 \***Tuition differential associated with these courses.**

### III. HEALTH AND PHYSICAL EDUCATION REQUIREMENTS.....1 CREDIT

**Required:** PHED 1189, Boot Camp, 1 cr

### TOTAL ..... 28 CREDITS

#### PROGRAM REQUIREMENTS:

Grade of "C" or better is required of all general education and Peace Officer course requirements for graduation.

#### PROGRAM OUTCOMES:

Upon completion of the Peace Officer program at RCTC, students will achieve the following outcomes:

- Demonstrate an understanding of the Criminal Justice System and criminal procedure.
- Demonstrate an understanding of the current Juvenile Justice System.
- Demonstrate an understanding of the importance of ethics in Professional Policing.
- Demonstrate an understanding of the Minnesota Criminal Statutes to satisfy POST Learning Objectives.

#### ADDITIONAL NOTES:

The Peace Officer - Certificate satisfies requirements to become MN POST Board Exam eligible. Graduates seeking employment as a Peace Officer will be required to pass the POST exam to become eligible to be licensed as a Peace Officer in the State of Minnesota.

# RCTC PROGRAM PLAN

**ADMISSION:** Individuals applying for the certificate program must already possess a minimum of a two-year degree from a regionally accredited college or university and also must have completed or are completing:

POFC 1105, Introduction to Law Enforcement, 3 cr  
POFC 1112, Introduction to Criminal Investigations, 3 cr

All certificate students are required to be certified first responders and to have a Diversity course. This can be done from your transferring college or by taking the following courses:

EMC 1121, First Responder, 2 cr and  
SOC 2625, Minority Group Relations, 3 cr

## **PROGRAM REQUIREMENTS:**

Grade of "C" or better is required of all general education and Peace Officer course requirements.

### **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in program activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15> Information about completing the background study will be available from program faculty.

Revised: 3/16/2023

Implementation: Fall 2023

# RCTC PROGRAM PLAN

## PEACE OFFICER - SKILLS

Certificate

### I. SKILLS COURSES.....12 CREDITS

- \*POFS 2101, Crime Scene Processing, 2 cr
- \*POFS 2102, Traffic Enforcement, 3 cr
- \*POFS 2103, Defensive Tactics, 2 cr
- \*POFS 2104, Firearms for SKILLS, 2 cr
- \*POFS 2105, Patrol Practical's, 3 cr

\*Tuition differential associated with these courses

### TOTAL.....12 CREDITS

### PROGRAM REQUIREMENTS:

Grade of "C" or better is required of all general education and Peace Officer course requirements for graduation.

### PROGRAM OUTCOMES:

Upon completion of the Peace Officer program at RCTC, students will achieve the following outcomes:

- Demonstrate an understanding of the Criminal Justice System and criminal procedure.
- Demonstrate an understanding of the current Juvenile Justice System.
- Demonstrate an understanding of the importance of ethics in law enforcement.
- Demonstrate an understanding of the Minnesota Criminal Statutes to satisfy POST Learning Objectives.

### ADDITIONAL NOTES:

This certificate program is designed for students that have completed or will complete a Professional Peace Officer Education (PPOE) academic program through any Minnesota PPOE Certified college or university but need to complete the PPOE SKILLS requirement to become licensure eligible.

ADMISSION: Individuals applying for the certificate program must already have completed or be in the process of completing their PPOE Profession Program Requirements for their degree. Students intending to enroll in the certificate program must have approval from their referring institutions PPOE POST Board Coordinator

All certificate students are required to be certified first responders and to have a diversity course. This can be done from your transferring college or by taking the following courses:  
 EMC 1121, First Responder, 2 cr and  
 SOC 2625, Minority Group Relations, 3 cr

# RCTC PROGRAM PLAN

**PROGRAM REQUIREMENTS:**

Grade of "C" or better is required of all general education and Peace Officer course requirements.

**Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in program activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15> Information about completing the background study will be available from program faculty.

Revised: 3/16/2023

Implementation: Fall 2023

# RCTC PROGRAM PLAN

## PERSONAL TRAINER

Diploma

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....4 CREDITS**

**GOAL 3: NATURAL SCIENCES .....4 CR**

**Choose from one of the following:**

BIOL 1107, Fundamentals of Anatomy and Physiology, 4 cr

BIOL 1110, Human Biology, 4 cr

BIOL 1217, Anatomy and Physiology I, 4 cr

### II. PROGRAM CORE REQUIREMENTS.....31 CREDITS

HLTH 1114, Responding to Emergencies, 3 cr

PHED 2155, Introduction to Kinesiology, 3 cr

PHED 2240, Methods of Group Fitness Instruction, 3 cr

PHED 2241, Essentials of Personal Training, 3 cr

PHED 2242, Essentials of Strength & Conditioning, 3 cr

PHED 2245, Group Fitness/Personal Trainer Certification Exam Prep, 2 cr

PHED 2249, Prevention and Care of Athletic Injuries, 3 cr

PHED 2252, Sport Psychology, 3 cr

PHED 2253, Sport Nutrition for Performance, 3 cr

PHED 2270, Intro to Physical Education, Health, Rec, Coaching, Fitness & Sport Mgmt, 2 cr

PHED 2293, Personal Trainer/Group Fitness Instructor Field Experience, 3 cr

### III. PROGRAM ELECTIVES.....3 CREDITS

**Choose three credits from the following courses:**

HLTH 1108, Weight Management through Nutrition and Fitness, 3 cr

PHED 1105, Lifetime Fitness, 3 cr

PHED 1122, Circuit Training, 1 cr

PHED 1124, Tai Chi and Meditation, 1 cr

PHED 1125, Yoga for Life I, 1 cr

PHED 1128, Yoga for Life II, 1 cr

PHED 1126, Step Aerobics, 1 cr

PHED 1127, Body Toning, 1 cr

PHED 1132, Speed and Power Running, 1 cr

PHED 1133, Strength Training for Men and Women, 1 cr

PHED 1150, Basic TRX Training, 1 cr

PHED 1151, High Intensity Interval Training (HITT) with TRX Suspension Training, 1 cr

PHED 1189, Boot Camp, 1 cr

PHED 1190, Strength, Agility and Quickness Training for Football Athletes, 1 cr

PHED 1191, Strength, Agility and Quickness Training for Volleyball and Soccer Athletes, 1 cr

PHED 1192, Strength, Agility and Quickness Training for Basketball Athletes, 1 cr

PHED 1193, Strength, Agility and Quickness Training for Wrestling Athletes, 1 cr

PHED 1194, Strength, Agility and Quickness Training for Baseball and Softball Athletes, 1 cr

# RCTC PROGRAM PLAN

PHED 2154, Introduction to Biomechanics, 3 cr  
REC 2210, Recreation Program Leader, 3 cr

**TOTAL .....38 CREDITS**

**PROGRAM OUTCOMES:**

Upon completion of the Personal Trainer program at RCTC, students will achieve the following outcomes:

- Demonstrate effective professional communication skills with clients and professional networks.
- Apply critical thinking skills in program planning and development, and perform responsible decision making in ethical and legal situations.
- Develop fitness prescriptions for both individual and group clients based on their abilities, goals, and motivations.
- Describe the characteristics, structure, and function of human anatomy, as well as, the understanding of basic exercise physiology, and prevention and care of sports injuries.
- Identify the many certification tools available throughout the fitness industry for continued improvement, re-certification and expansion with industry trends.

Revised: 05/08/2018  
Implementation: Fall 2018

# RCTC PROGRAM PLAN

## ART + DESIGN: PHOTOGRAPHY

Certificate

### I. PROGRAM CORE REQUIREMENTS.....18 CREDITS

- ART 1130, Digital Art I, 3 cr
- ART 1184, Photography I, 3 cr
- ART 1290, Media Arts, 3 cr
- ART 2280, Photography II, 3 cr
- ART 2281, Professional Portfolio, 3 cr
- ART 2286, Photo Lighting Techniques, 3 cr

**TOTAL..... 18 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Photography program at RCTC, students will achieve the following outcomes:

- Identify and evaluate the aesthetic quality, cultural significance and historical context of photographs.
- Articulate an informed personal reaction to artwork through critique.
- Create images that demonstrate intentional compositional techniques based on the elements of art and principles of design.
- Safely create digital imagery using manual controls including but not limited to the use of digital cameras, studio lighting equipment, digital image processing and output.
- Demonstrate basic proficiency with digital imaging software.
- Create an extended body of photographic work related to a single theme or idea of personal significance.

### **ADDITIONAL NOTES:**

**PURPOSE:** The Photography Certificate is a sequence of Art courses that emphasizes artistic expression and build technical, visual, interpretive and analytical skills, and knowledge in Art with an emphasis in photography. This certificate acknowledges successful completion of courses that cover both basic and creative aspects of camera, digital darkroom, lighting, digital imaging, media arts, presentation, and portfolio development. To complete a certificate, a portfolio of photographic work and supporting professional development will further validate quality and interpretive skills.

Revised: 02/20/2024

Implementation: Fall 2024



# RCTC PROGRAM PLAN

## PRACTICAL NURSING

Diploma

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....12 CREDITS

BIOL 1107\*, Fundamentals of Anatomy and Physiology, 4 cr

ENGL 1117\*, Reading and Writing Critically I, 4 cr

PSYC 2618\*, General Psychology, 4 cr

### II. PROGRAM CORE REQUIREMENTS.....27 CREDITS

PNM 1200, Pharmacology for Practical Nursing, 3 cr

PNM 1210, Success in Nursing, 1 cr

PNM 1250, Nursing Fundamentals in the Care of the Older Adult, 7 cr

PNM 1320, Family and Mental Health Concepts, 6 cr

PNM 1340, Adult Nursing, 6 cr

PNM 1440, Integrated Clinical Application, 4 cr

#### TOTAL.....39 CREDITS

### PROGRAM OUTCOMES:

Upon completion of the Practical Nursing program at RCTC, students will achieve the following outcomes:

- Cultivate accountability, integrity, and responsibility for ongoing professional growth in nursing practice as a valid member of the health care team. (Professionalism)
- Practice within the ethical and legal framework for the practical nurse. (Professionalism)
- Identify the rationale for clinical decisions by integrating evidence based knowledge and practice to the nursing process to provide safe nursing care across the life span. (Critical Thinking)
- Develop caring relationships with respect for human dignity and diversity. (Caring)
- Collaborate with patient, family, and the health team using evidenced based knowledge and practice to achieve quality patient centered outcomes. (Collaboration)
- Safely implement nursing interventions based on the need for health promotion, health maintenance, health restoration, and end of life care within the scope of the practical nurse. (Nursing Intervention)

### ADDITIONAL NOTES:

**PURPOSE:** The Practical Nursing major is designed to provide students with the knowledge and skills necessary to provide direct nursing care to patients in hospitals, nursing homes, clinics and home and community based settings. This educational program includes classroom theory, laboratory experience and supervised clinical experience in area hospitals, nursing homes, clinics and community health care agencies. During the last semester of the program, the clinical rotation includes integrated clinical experience where students participate in eight-hour shifts to assist them in making the transition from student role to the role of the graduate practical nurse. A graduate of this program is eligible to apply to take the National Council for Licensing Exam - Practical Nursing (NCLEX-PN). The program is approved by the Minnesota

# RCTC PROGRAM PLAN

Board of Nursing and is accredited by the Accreditation Commission for Education in Nursing, Inc., 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326 ([www.acenursing.org](http://www.acenursing.org)).

RCTC class hours are 50 minutes in length, 1 credit is a minimum of 16 hours of classroom contact. The College has an expectation that students spend two hours of preparatory work for every one hour in the classroom. Nursing clinical assignments are calculated on a ratio of 1:3. Three hours are spent in clinical work for every one credit. Science course labs are assigned two hours for one credit.

## PRACTICAL NURSING COURSE SEQUENCE:

<b>FALL</b>		<b>SPRING</b>		<b>SUMMER</b>	
<b>Semester I</b>		<b>Semester II</b>		<b>Semester III</b>	
PNM 1210	1 cr	PNM 1320	6 cr	PNM 1440	4 cr
PNM 1250	7 cr	PNM 1340	6 cr		
PNM 1200	3 cr	PSYC 2618*	4 cr		
ENGL 1117*	4 cr				
BIOL 1107*	4 cr				
<b>TOTAL</b>	<b>19 cr</b>	<b>TOTAL</b>	<b>16 cr</b>	<b>TOTAL</b>	<b>4 cr</b>

\* ENGL 1117 and BIOL 1107 must be completed prior to Semester II courses.

\* PSYC 2618 must be completed prior to Semester III.

Upon successful completion of the program, students are eligible to apply for the National Council Licensure Examination-Practical Nursing (NCLEX-PN) and enter the profession of nursing as defined by Minnesota statutes (148.171 Subd. 14, Practice of Practical Nursing).

### **Notice of Minnesota Background Check Requirement**

Minnesota Statue 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at:

<https://www.revisor.mn.gov/statutes/?id=245C.15>

Students in the program will also be required to complete a National Criminal Background Study. Information about completing the background study will be available from program faculty.

Revised: 02/09/2021

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## PRE-SOCIAL WORK TRANSFER PATHWAY

Associate of Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### **GENERAL EDUCATION REQUIREMENTS.....41 CREDITS**

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### **GOAL 1: WRITTEN AND ORAL COMMUNICATION .....11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

#### **GOAL 3: NATURAL SCIENCES .....7 CR**

BIOL 1110, Human Biology, 4 cr

Credits from MnTC Goal 3 (cannot be BIOL)

#### **GOAL 4: MATHEMATICS/LOGICAL REASONING.....4 CR**

MATH 2208, Fundamentals of Statistics, 4 cr OR MATH 1090, Statway Statistics II, 4 cr

#### **GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....10 CR**

PSYC 2618, General Psychology, 4 cr

PSYC 2626, Human Growth and Development, 3 cr

SOC 1614, Introduction to Sociology, 3 cr

#### **GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

Credits from MnTC Goal 6

#### **GOAL 7: HUMAN DIVERSITY.....3 CR**

COMM 1130, Interpersonal Communication, 3 cr

#### **GOAL 9: ETHICAL/CIVIC RESPONSIBILITY.....3 CR**

POLS 1615, Introduction to American Government, 3 cr

### II. REQUIRED SPECIFIC CONTENT AREA COURSES.....6 CREDITS

HS 1522, Introduction to Human Services, 3 cr

HS 1585, Human Service Field Experience, 3 cr

### III. PROFESSIONAL PROGRAM-RELATED ELECTIVE COURSES.....13 CREDITS

Select Human Services (HS) courses

**TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Pre-Social Work Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Recognize the background of humans and their environment, genetics, and evolution.
- Analyze data and sample populations.
- Recognize the complexity of the structures and dynamics of society.
- Understand the principles of psychology as well as the ethical issues involved in the study of behavior and mental processes.
- Define physical, cognitive, and social-emotional development from infancy through late adulthood.
- Acknowledge how diversity and difference characterize and shape the human experience.
- Describe social welfare as a global social institution linked to the workings of other institutions and shaped by the intersection of politics, economics, social circumstances and value systems which impact different people in different ways.
- Gain experiential learning in a social service setting, a minimum of 120 hours and evaluated by a site supervisor.
- Demonstrate the values of the Social Work Profession as well as the historical development of the profession at an introductory level.

## **ADDITIONAL NOTES:**

**PURPOSE:** The Pre-Social Work Transfer Pathway A.S. offers students the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated Social Work bachelor's degree programs at Minnesota State universities. The curriculum is designed so that students completing the pathway degree and transferring to one of the seven Minnesota State Universities\* enter the university with junior-year status. The human services professionally related electives within the pathway provide students with knowledge and skills in the broad-based helping professions.

\*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

This transfer pathway degree will transfer to the following designated baccalaureate degree majors:

- At Bemidji State University:  
Social Work, BS
- At Metropolitan State University:  
Social Work, BSW
- At Minnesota State University, Mankato:  
Social Work, BSSW
- At Minnesota State University, Moorhead:  
Social Work, BSW
- At Southwest Minnesota State University:  
Social Work, BS

# RCTC PROGRAM PLAN

At St. Cloud State University:  
Social Work, BS

At Winona State University:  
Social Work, BSW

## **Notice of Minnesota Background Check Requirement**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background check will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Information about completing the background study will be available from program faculty.

Revised: 11/14/2023

Implementation: Fall 2024

# RCTC PROGRAM PLAN

## PSYCHOLOGY TRANSFER PATHWAY

Associate of Arts

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS..... 40 CREDITS**

**GOAL 1: COMMUNICATION .....11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

**GOAL 2: is fulfilled when all other MnTC goals for this plan are completed.**

**GOAL 3: NATURAL SCIENCES .....minimum of 6 CR**

A minimum of two courses with a lab from two different areas that meet MnTC Goal 3

*Recommended:* a course in Biology

**GOAL 4: MATHEMATICAL/LOGICAL REASONING..... minimum of 3 CR**

MATH 1115, College Algebra, 3 cr **OR**

MATH 2208, Fundamentals of Statistics, 4 cr **OR**

MATH 2350, Introduction to Mathematical Statistics, 4 cr **OR**

MATH 1090, Statway Statistics II, 4 cr

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES ....minimum of 9 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 5

**GOAL 6: THE HUMANITIES AND FINE ARTS .....minimum of 9 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 6

**Recommended:** a course in Philosophy

Two credits from each of the following:

**Goal 7: Human Diversity**

To be met by a course taken in Goal 3, 5, or 6

**Goal 8: Global Perspective**

To be met by a course taken in Goal 3, 5, or 6

**Goal 9: Ethic & Civic Responsibility**

To be met by a course taken in Goal 3, 5, or 6

**Goal 10: People & Environment**

To be met by a course taken in Goal 3, 5, or 6

**II. FIRST YEAR EXPERIENCE.....0 -1 CREDIT\***

FYEX 1000, College Success Strategies, 1 cr

\*Students entering RCTC with less than 12 credits at the time of admission and pursuing an RCTC Associate of Arts degree are required to take FYEX 1000, College Success Strategies.

# RCTC PROGRAM PLAN

## III. HEALTH AND PHYSICAL EDUCATION REQUIREMENTS..... 3 CREDITS

Any combination of Health courses (numbered 1102, 1109, 1110, 1111, 1114, 1132, 1135, 2126) and/or Physical Education courses (numbered 1100-1199). 1 credit may be from Varsity Athletics (PHED 1210-1236; PHED 2210-2236).

## IV. PROGRAM REQUIREMENTS.....14 CREDITS

PSYC 2618, General Psychology, 4 cr  
 PSYC 2630, Statistics for the Behavioral Sciences, 4 cr  
 PSYC 2611, Social Psychology, 3 cr **OR**  
 PSYC 2622, Abnormal Psychology, 3 cr **OR**  
 PSYC 2626, Human Growth and Development, 3 cr  
 One additional course in Psychology, 3 cr

## V. ELECTIVES..... 2-3 CREDITS

Any course numbered above 1000 as needed to achieve a total of 60 credits.

## TOTAL .....60 CREDITS

### **PROGRAM OUTCOMES:**

Upon completion of the Psychology Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Demonstrate familiarity with the major concepts, theoretical perspectives, and empirical findings in psychology.
- Describe research methods in psychology.
- Apply psychological principles to personal and social needs.

### **ADDITIONAL NOTES:**

The Psychology Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated Psychology bachelor's degree programs at Minnesota State universities.

The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities\* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

\*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

This transfer pathway degree will transfer to the following designated baccalaureate degree majors:

At Bemidji State University:  
 Psychology, BA  
 Psychology, BS

# RCTC PROGRAM PLAN

At Metropolitan State University:

Psychology, BA

At Minnesota State University, Mankato:

Psychology, BS

At Minnesota State University, Moorhead:

Psychology, BA

At Southwest Minnesota State University:

Psychology, BA

At St. Cloud State University:

Community Psychology, BS

Psychology, BA

Winona State University:

Psychology, BA (options A & B)

Revised: 02/27/2020

Implementation: Fall 2020



# RCTC PROGRAM PLAN

## RADIOGRAPHY

Associate of Applied Science

*An Affiliated Program with the Mayo Clinic School of Health Sciences*

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....28 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR**

ENGL 1117, Reading and Writing Critically I, 4 cr

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

**GOAL 3: NATURAL SCIENCES .....15 CR**

BIOL 1217, Anatomy and Physiology I, 4 cr

BIOL 1218, Anatomy and Physiology II, 4 cr

CHEM 1117, General, Organic, and Biological Chemistry, 4 cr

PHYS 1103, Principles of Physics, 3 cr

**GOAL 4: MATHEMATICAL/LOGICAL REASONING.....3 CR**

MATH 1115, College Algebra, 3 cr

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

PHIL 1125, Ethics, 3 cr **OR**

PHIL 1135, Bioethics, 3 cr

### II. PROGRAM CORE REQUIREMENTS.....53 CREDITS

*The following courses are offered through the Mayo Clinic School of Health Sciences:*

RAD 3011, Foundations of Radiography, 2 cr

RAD 3101, Radiographic Procedures I, 2 cr

RAD 3102, Radiographic Procedures II, 7 cr

RAD 3111, Radiation Physics, 2 cr

RAD 3201, Introduction to Clinic Radiography, 2 cr

RAD 3202, Principles of Radiographic Exposure I, 2 cr

RAD 3301, Clinical Practicum I, 5 cr

RAD 3302, Clinical Practicum II, 9 cr

RAD 4103, Radiographic Procedures III, 2 cr

RAD 4202, Principles of Radiographic Exposure II, 1 cr

RAD 4243, Radiation Biology and Protection, 2 cr

RAD 4302, Advanced Modalities, 1 cr

RAD 4303, Clinical Practicum III, 7 cr

RAD 4403, Clinical Practicum IV, 7 cr

RAD 4501, Certification Exam Review, 2 cr

**TOTAL.....81 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Radiography program at RCTC, students will achieve the following outcomes:

- Demonstrate professional behavior in the clinical setting.
- Demonstrate knowledge of professional attributes.
- Demonstrate clinical competence in producing images of diagnostic quality.
- Demonstrate safe radiation practices for patients, self and staff.
- Assess the quality of images.
- Demonstrate the ability to adapt positioning for non-routine and trauma exams.
- Demonstrate effective verbal communication skills.
- Demonstrate effective written communication skills.

## **ADDITIONAL NOTES:**

**PURPOSE:** Mayo Clinic School of Health Sciences (MCSHS) now offers a rigorous 18 month Radiography Program at Mayo Clinic's campus in Rochester, Minnesota. Radiography is an exciting and challenging career involving the use of highly sophisticated equipment to create X-rays, which are anatomical images used by physicians to diagnose disease, injury or disability. Radiographers have direct patient contact in clinic and hospital settings and are valuable members of the health care team. The Radiography Program offers an exceptional educational experience by providing the high-quality didactic and clinical experiences needed to create a well-rounded, fully competent radiographer in an environment based on teamwork and mutual respect. Graduates who obtain a certificate in Radiography and Associate Degree are eligible to take the radiography certification examination administered by the American Registry of Radiologic Technologists (ARRT). Successfully passing the ARRT Primary Radiography Certification Exam will earn graduates the nationally recognized credentials of R.T.(R).

## **PROGRAM ENTRANCE REQUIREMENTS:**

Applicants who meet the general admission requirements below will be reviewed by an admissions committee.

Applicants are most competitive when they:

- Have a GPA of at least 3.0 on a 4.0 scale, including courses in mathematics and sciences
- Have previous patient care or customer service experience
- Demonstrate genuine interest in the radiography profession
- Have completed the prerequisite coursework within 5 years of application

To be eligible for the Radiography Program, applicants must have a minimum cumulative GPA of 2.75 on a 4.0 scale. A job shadow in a general radiology department is required. This can be done at Mayo Clinic or another health care institution. Please contact the program for additional information on setting up a job shadow.

## **Pathways into Mayo Radiography Program**

Students are required to complete college coursework prior to applying to the Mayo Clinic School of Health Sciences (MCSHS) Radiography Program. Students have two options to choose from when preparing for application to the MCSHS Radiography Program.

1. Students who already have an associate degree (or higher) can apply as a certificate student. If this is your pathway, see the Certificate option details below.

# RCTC PROGRAM PLAN

2. Students seeking an associate or a bachelor degree while completing the MCSHS Radiography Program must apply to an affiliated institution prior to applying to the MCSHS Radiography Program. If this is your pathway, see the affiliated institution details below to determine what coursework is required prior to applying to the MCSHS Radiography Program.

## Affiliated Bachelor Degree Option

Students seeking a bachelor degree at these affiliated academic institutions are eligible to apply to the MCSHS Radiography Program after completing the required coursework established by the academic institution.

- Minot State University (MSU) — Minot, North Dakota
- Mount Marty College (MMC) — Yankton, South Dakota
- St. Cloud State University (SCSU) — St. Cloud, Minnesota
- Saint Mary's University (SMU) — Winona, Minnesota
- University of Mary (UMary) — Bismarck, North Dakota
- University of Minnesota Rochester (UMR) — Rochester, Minnesota
  - Note that UMR offers a transfer option for students who complete the prerequisite coursework at another regionally accredited college or university. See the UMR website for additional information.
- University of Sioux Falls (USF) — Sioux Falls, South Dakota

## Affiliated Associate Degree Option

Students seeking an associate in applied science degree at Rochester Community and Technical College (RCTC) are eligible to apply to the MCSHS Radiography Program. Students who pursue this pathway must complete 28 credits at RCTC prior to starting the MCSHS Radiography Program.

- Rochester Community and Technical College (RCTC) – Rochester, MN

## Certificate option

Students may be eligible for the certificate option if they have met all of the following:

1. Earned an associate degree (or higher) before the program start date.
2. Completed all of the required program prerequisite coursework.

## Prerequisite Coursework

All students are required to complete these prerequisite courses prior to starting the MCSHS Radiography Program:

- English- Minimum of one semester of college-level English composition.
- Mathematics- Minimum of one semester of college algebra; a higher-level math course also satisfies this requirement.
- Anatomy and Physiology- Minimum of two semesters of college-level anatomy and physiology with a lab component.
- Physics- Minimum of one semester of college-level physics with a lab component.
- Speech or Interpersonal Communications - Minimum of one semester of college-level speech or interpersonal communications.
- Ethics- Minimum of one semester of college-level ethics or medical ethics.

Revised: 05/14/2019

Implementation: Fall 2019

# RCTC PROGRAM PLAN

## SCIENCE FOUNDATIONS A

Certificate

### I. MINNESOTA TRANSFER CURRICULUM (MNTC)

**GENERAL EDUCATION REQUIREMENTS.....16 CREDITS**

#### GOAL 3: NATURAL SCIENCE

BIOL 1220, General Biology I, 4 cr  
 BIOL 1230, General Biology II, 4 cr  
 CHEM 1127, Chemical Principles I, 4 cr  
 CHEM 1128, Chemical Principles II, 4 cr

### II. ELECTIVES.....Minimum of 3 Credits

#### (See your counselor for additional options)

BIOL 1217, Principles of Anatomy & Physiology I, 4 cr  
 BIOL 1218, Principles of Anatomy & Physiology II, 4 cr  
 BIOL 2021, General Microbiology, 4 cr  
 BIOL 2300, Genetics, 4 cr  
 MATH 1127, Calculus I, 5 cr  
 MATH 1128, Calculus II, 5 cr  
 MATH 2208, Fundamentals of Statistics, 4 cr  
 PHIL 1125, Ethics, 3 cr

**TOTAL.....19 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of their academic path in Science Foundations A at RCTC, students will achieve the following outcomes:

- Demonstrate basic knowledge and understanding of fundamental scientific principles.
- Apply skills in analytical thinking and problem solving to experimental and theoretical data.
- Demonstrate skills in laboratory operations including making measurements, preparing solutions, using a microscope, operating instrumentation, designing experiments, preparing samples for various analyses.
- Provide clear and compelling data and analysis in oral and written communications including papers, posters, or presentations.
- Work both independently and collaboratively in the classroom and in the laboratory.
- Exhibit growth in academic performance and personal and professional responsibility.

### **ADDITIONAL NOTES:**

**PURPOSE:** The Science Foundations Certificates A and B provide students currently holding a baccalaureate degree the opportunity to complete science and Liberal Arts coursework (if required) to apply to a variety of professional programs. These include medical, physical therapy, veterinary medicine, physician assistant, occupational therapy, pharmacy, dentistry, chiropractic, osteopathic medicine, as well as other professional benefit from this program. Course prerequisites must have been taken in the past five years, or instructor permission granted to enter classes.

# RCTC PROGRAM PLAN

Recent changes to professional program entrance exams may require students to gain or update courses in the humanities. Psychology or sociology courses are available to provide this preparation.

Classes chosen for this certificate prepare students to begin work towards the Science Foundations B Certificate. There is flexibility in the courses and sequencing which allows for adaption to match student needs based on their field of study and transfer coursework. Students must check with their desired professional programs and institutions to ensure this coursework fulfills their prerequisites. Additional coursework may be required for some programs.

An additional application is required for entrance into this program to ensure previous completion of a Bachelor's degree.

Revised: 02/13/2018

Implementation: Spring 2018

# RCTC PROGRAM PLAN

## SCIENCE FOUNDATIONS

Associate in Science

### I. MINNESOTA TRANSFER CURRICULUM (MNTC)/

#### **GENERAL EDUCATION REQUIREMENTS.....35-36 CREDITS**

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas. Consult with an advisor to see which MATH and elective courses are required by your transfer institution.*

#### **GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr  
ENGL 1117, Reading and Writing Critically I, 4 cr

#### **GOAL 3: NATURAL SCIENCES .....8 CR**

BIOL 1230, General Biology II, 4 cr  
CHEM 1127, Chemical Principles I, 4 cr

#### **GOAL 4: MATHEMATICS/LOGICAL REASONING.....4-5 CR**

Select one from the list below.  
MATH 1090, Statway Statistics II, 4 cr  
MATH 1117, Precalculus, 4 cr  
MATH 1127, Calculus I, 5 cr  
MATH 1128, Calculus II, 5 cr  
MATH 2208, Fundamentals of Statistics, 4 cr

#### **GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES ..... 6 CR**

Credits from MNTC Goal 5 – 2 areas  
Suggested Courses:  
PSYC 2618, General Psychology, 4 cr  
PSYC 2626, Human Growth & Development, 3 cr  
SOC 1614, Introduction to Sociology, 3 cr

#### **GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY.....6 CR**

Credits from MNTC Goal 6 – 2 areas  
Suggested Courses:  
Foreign language of your choice, 4 cr  
HUM 1131, Introduction to the Humanities, 3 cr  
PHIL 1125, Ethics, 3 cr  
PHIL 1135, Bioethics, 3 cr

#### **GOAL 10: PEOPLE AND THE ENVIRONMENT .....4 CR**

BIOL 1220, General Biology I, 4 cr (also meets Goal 3)

### II. PROGRAM CORE REQUIREMENTS.....12 CREDITS

CHEM 1128, Chemical Principles II, 4 cr  
CHEM 2127, Organic Chemistry I, 4 cr  
CHEM 2128, Organic Chemistry II, 4 cr

# RCTC PROGRAM PLAN

## III. Electives.....12-13 CR

BIOL 1211, Principles of Nutrition, 3 cr  
 BIOL 1217, Anatomy & Physiology I, 4 cr  
 BIOL 1218, Anatomy & Physiology II, 4 cr  
 BIOL 2000, Ecology, 4 cr  
 BIOL 2021, General Microbiology, 4 cr  
 BIOL 2200, General Zoology, 4 cr  
 BIOL 2300, Genetics, 4 cr  
 CHEM 2800, Biochemistry, 3 cr  
 CHEM 2297, Chemistry Research, 1 cr  
 ESCI 1114, Minnesota Rocks and Waters with Lab, 4 cr  
 PHYS 1117, Introductory Physics I, 5 cr OR  
 PHYS 1127, Classical Physics I, 5 cr  
 PHYS 1118, Introductory Physics II, 5 cr OR  
 PHYS 1128, Classical Physics II, 5 cr

Additional options may be more appropriate for the desired transfer program.

**TOTAL .....60 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Science Foundations program at RCTC, students will achieve the following outcomes:

- Demonstrate basic knowledge and understanding of fundamental scientific principles.
- Apply skills in analytical thinking and problem solving to experimental and theoretical data.
- Demonstrate skills in laboratory operations including making measurements, preparing solutions, using a microscope, operating instrumentation, designing experiments, preparing samples for various analyses.
- Provide clear and compelling data and analysis in oral and written communications including papers, posters, or presentations.
- Work both independently and collaboratively in the classroom and in the laboratory.
- Exhibit growth in academic performance and personal and professional responsibility.

### **ADDITIONAL NOTES:**

This two-year degree includes basic science curriculum required for admission by various health science professional schools, or science transfer programs. Check with the school(s) of your choice to ensure that their specific requirements are fulfilled.

Revised: 03/05/2020

Implementation: Fall 2021

# RCTC PROGRAM PLAN

## SCIENCE FOUNDATIONS B

Certificate

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....18 CREDITS**

#### GOAL 3: NATURAL SCIENCES

CHEM 2127, Organic Chemistry I, 4 cr

CHEM 2128, Organic Chemistry II, 4 cr

PHYS 1117, Introductory Physics I, 5 cr

PHYS 1118, Introductory Physics II, 5 cr **OR**

PHYS 1127, Classical Physics I, 5 cr

PHYS 1128, Classical Physics II, 5 cr

### II. ELECTIVES.....Minimum of 3 Credits

**(See your counselor for additional options)**

BIOL 1217, Principles of Anatomy & Physiology I, 4 cr

BIOL 1218, Principles of Anatomy & Physiology II, 4 cr

BIOL 2021, General Microbiology, 4 cr

BIOL 2300, Genetics, 4 cr

CHEM 2800, Biochemistry, 3 cr

MATH 1127, Calculus I, 5 cr

MATH 1128, Calculus II, 5 cr

MATH 2208, Fundamentals of Statistics, 4 cr

PHIL 1125, Ethics, 3 cr

**TOTAL .....21 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of their academic path in Science Foundations B at RCTC, students will achieve the following outcomes:

- Demonstrate basic knowledge and understanding of fundamental scientific principles.
- Apply skills in analytical thinking and problem solving to experimental and theoretical data.
- Demonstrate skills in laboratory operations including making measurements, preparing solutions, using a microscope, operating instrumentation, designing experiments, preparing samples for various analyses.
- Provide clear and compelling data and analysis in oral and written communications including papers, posters, or presentations.
- Work both independently and collaboratively in the classroom and in the laboratory.
- Exhibit growth in academic performance and personal and professional responsibility.



# RCTC PROGRAM PLAN

## **ADDITIONAL NOTES:**

**PURPOSE:** The Science Foundations Certificates A and B provide students currently holding a baccalaureate degree the opportunity to complete science and liberal arts coursework (if required) to apply a variety of professional programs. These include medical, physical therapy, veterinary medicine, physician assistant, occupational therapy, pharmacy, dentistry, chiropractic, osteopathic medicine, as well as other professional programs. Students with a degree or coursework in the sciences that is not considered current may also benefit from this program. Course prerequisites must have been taken in the past five years, or instructor permission granted to enter classes.

Recent changes to professional program entrance exams may require students to gain or update course in humanities. Psychology or sociology courses are available to provide this preparation.

Classes chose for this certificate will prepare students for pre-professional admissions exams such as the MCAT, PCAT and DAT as well as fulfill prerequisites requirements for many professional programs. There is flexibility in the courses and sequencing which allows for adaptation to match student needs based on their field of study and transfer coursework. Students must check with their desired professional programs and institutions to ensure this coursework fulfills their prerequisites. Additional coursework may be required for some programs.

An additional application is required for entrance into this program to ensure previous completion of a Bachelor's degree.

Revised: 10/13/2015

Implementation: Spring 2016

# RCTC PROGRAM PLAN

## SOCIOLOGY TRANSFER PATHWAY

Associate of Arts

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS..... 40 CREDITS**

**GOAL 1: COMMUNICATION .....11 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

ENGL 1118, Reading and Writing Critically II, 4 cr

**GOAL 2: is fulfilled when all other MnTC goals for this plan are completed.**

**GOAL 3: NATURAL SCIENCES .....minimum of 6 CR**

A minimum of two courses with a lab from two different areas that meet MnTC Goal 3

**GOAL 4: MATHEMATICAL/LOGICAL REASONING..... minimum of 3 CR**

Credits from MnTC Goal 4

**Recommended:** MATH 2208, Fundamentals of Statistics, 4 cr **OR**

MATH 1090, Statway Statistics II or another college level math course.

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES ..minimum of 10 CR**

SOC 1614, Introduction to Sociology, 3 cr

One course from Elective Category: Social Inequality and Stratification

SOC 1616, Social Problems, 3 cr

SOC 2625, Minority Group Relations 3 cr

A minimum of two credits from each of two different areas other than SOC that meet MnTC Goal 5

**GOAL 6: THE HUMANITIES AND FINE ARTS .....minimum of 9 CR**

A minimum of two credits from each of three different areas that meet MnTC Goal 6

Two credits from each of the following:

**Goal 7: Human Diversity**

*Recommended:*

SOC 1614, Introduction to Sociology, 3 cr **OR**

SOC 2612, Marriage and the Family Across the Life Span, 3 cr **OR**

SOC 2625, Minority Group Relations 3 cr

**Goal 8: Global Perspective**

**Goal 9: Ethic & Civic Responsibility**

*Recommended:* SOC 1616, Social Problems, 3 cr

# RCTC PROGRAM PLAN

## Goal 10: People & Environment

*Recommended:* SOC 1618, Environmental Sociology 3 cr

- II. FIRST YEAR EXPERIENCE.....0 -1 CREDIT\***  
 FYEX 1000, College Success Strategies, 1 cr  
 \*Students entering RCTC with less than 12 credits at the time of admission and pursuing an RCTC Associate of Arts degree are required to take FYEX 1000, College Success Strategies.
- III. HEALTH AND PHYSICAL EDUCATION REQUIREMENTS..... 3 CREDITS**  
 Any combination of Health courses (numbered 1102, 1109, 1110, 1111, 1114, 1132, 1135, 2126) and/or Physical Education courses (numbered 1100-1199). 1 credit may be from Varsity Athletics (PHED 1210-1236; PHED 2210-2236).
- IV. PROGRAM REQUIREMENTS.....3 CREDITS**  
One course from Elective Category: Organizations and Institutions  
 SOC 1618, Environmental Sociology, 3 cr OR  
 SOC 2612, Marriage and the Family Across the Life Span, 3 cr OR  
 SOC 2614, Sociology of Health, Healing, and Illness, 3 cr
- V. ELECTIVES..... 0-15 CREDITS**  
 Any course numbered above 1000 as needed to achieve a total of 60 credits.
- TOTAL .....60 CREDITS**

### **PROGRAM OUTCOMES:**

**PURPOSE:** Upon completion of the Sociology Transfer Pathway program at RCTC, students will achieve the following outcomes:

- Articulate and demonstrate how the sociological perspective works in everyday life.
- Apply multiple theories and theoretical approaches to explain social patterns.
- Demonstrate their understanding of and ability to analyze social stratification.
- Identify the relationships between macro social structures and micro social processes.

### **ADDITIONAL NOTES:**

The Sociology Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated Sociology bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities\* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

\*Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

# RCTC PROGRAM PLAN

At Bemidji State University:

Sociology, BA

At Metropolitan State University:

Sociology, BA

At Minnesota State University, Mankato:

Applied Sociology, BA

Sociology, BA

Applied Sociology, BS

Sociology, BS

At Minnesota State University, Moorhead:

Sociology, BA

At Southwest Minnesota State University:

Sociology, BA

At St. Cloud State University:

Sociology, BA

Sociology, BA (Concentration in Critical Applied Sociology)

At Winona State University:

Sociology, BA

Revised: 02/11/2020

Implementation: Fall 2020

# RCTC PROGRAM PLAN

## SPORT MANAGEMENT

Associate in Science

### I. MINNESOTA TRANSFER CURRICULUM (MNTC)/

**GENERAL EDUCATION REQUIREMENTS.....30 CREDITS**

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 3: NATURAL SCIENCES .....4 CR**

BIOL 1107, Fundamentals of Anatomy and Physiology, 4 cr **OR**

BIOL 1110, Human Biology, 4 cr **OR**

BIOL 1217, Anatomy and Physiology I, 4 cr

**GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 CR**

Recommended Course:

MATH 1115, College Algebra, 3 cr

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES .....10 CR**

Recommended Courses:

ECON 2214, Principles of Economics, Micro, 4 cr

ECON 2215, Principles of Economics, Macro, 4 cr

SOC 1614 Introduction to Sociology, 3 cr

PSYC 1611 Psychology of Adjustment, 3 cr

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY.....6 CR**

Credits from MNTC Goal 6

### II. PROGRAM CORE REQUIREMENTS.....23 CREDITS

AOP 2350, Microcomputer Business Applications, 3 cr

BUS 2210, Legal Environment of Business, 3 cr

HLTH 1114, Responding to Emergencies, 3 cr

PHED 1105, Lifetime Fitness, 3 cr

PHED 2270, Introduction to Physical Education, 2 cr

PHED 2280, Introduction to Sport Facility Management, 3 cr

PHED 2281, Development and Management of Sport/Recreation Facilities, 3 cr

REC 2210, Recreation Program Leader, 3 cr

### III. ELECTIVES.....7 CREDITS

Select courses from ACCT, BUS, COMM, PHED, or MnTC.

**TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Sport Management program at RCTC, students will achieve the following outcomes:

- Demonstrate effective professional communication skills with clients and professional networks.
- Apply critical thinking skills in program planning and development and perform responsible decision making in ethical and legal situations.
- Demonstrate leadership skills and the appropriate use of power in any given situation.

Revised: 2/14/2023

Implementation: Fall 2023

# RCTC PROGRAM PLAN

## SUPERVISORY LEADERSHIP

Associate of Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....16 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR**

COMM 1114, Fundamentals of Speech, 3 cr

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 CR**

MATH 1111, Contemporary Concepts in Mathematics, 3 cr (**Recommended**)

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

ECON 1101, Introduction to Economics, 3 cr

ECON 2214, Principles of Economics: Micro, 4 cr

PSYC 1611, Psychology of Adjustment, 3 cr

PSYC 2618, General Psychology, 4 cr

SOC 1614, Introduction to Sociology, 3 cr

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

Credits from MnTC Goal 6

### II. PROGRAM CORE REQUIREMENTS.....32 CREDITS

ACCT 1415, Budgeting for Decision Making, 3 cr

BUS 1307, Legal Issues for Supervisors, 3 cr

SMGT 1115, Strategies for Personal Leadership, 3 cr

SMGT 1125, Leadership Development and Ethics, 3 cr

SMGT 1137, Leading Innovation and Change, 3 cr

SMGT 1217, Foundations of Quality, 3 cr

SMGT 1221, Decision Making and Problem-Solving, 3 cr

SMGT 1225, Team Building and Facilitation Skills, 3 cr

SMGT 1327, Managing Employee Performance and Conflict, 3 cr

SMGT 1352, Recruitment, Retention and Employee Development, 4 cr

SMGT 1420, Documentation and Written Communication Skills for Supervisors, 1 cr

### III. PROGRAM TECHNICAL REQUIREMENTS.....12 CREDITS

AOP 2350, Microcomputer Business Applications, 3 cr

BUS 2232, Principles of Management, 3 cr

BUS 2235, Organizational Dynamics, 3 cr

BUS 2296, Business Internship, 3 cr

**TOTAL .....60 CREDITS**

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Supervisory Leadership program at RCTC, students will achieve the following outcomes:

- Select leadership and management skills needed to be an effective supervisor.
- Utilize interpersonal skills to build strong relationships between individuals, teams, and the organization as a whole.
- Practice critical thinking skills through decision-making, problem-solving, innovation, and continuous improvement activities.
- Apply appropriate employment law to supervisory actions such as recruitment, hiring, performance management, and documentation.
- Analyze financial data from a supervisory perspective to make business decisions.

## **ADDITIONAL NOTES:**

**PURPOSE:** The Supervisory Leadership program is specifically designed to provide *employed* students with the skills necessary to be successful in a position of supervisory leadership. Students can benefit from this program by becoming qualified for advancement into a supervisory position, to enhance current skills for persons who are already supervising others, or for advancement into a position of greater responsibility and influence.

Students will have the opportunity to increase their skills in leadership, communications, team building, employee motivation, creative problem solving, performance management, coaching, managing priorities, building productive working relationships, conducting effective meetings, and many more supervisory leadership techniques and tools.

Organizations today are demanding higher levels of supervisory and leadership competence from their frontline leaders. The Supervisory Leadership Program can provide students with the supervisory expertise and leadership skill to meet those challenges.

This program is structured to allow students to remain employed while attending classes on a part-time basis. Classes are scheduled primarily at night and on weekends. Upon approval, students may transfer applicable transcribed course credits and/or experiential learning to satisfy required or elective program credits.

Revised: 02/08/2022

Implementation: Fall 2022



# RCTC PROGRAM PLAN

## SUPERVISORY LEADERSHIP

Certificate

<b>I. PROGRAM CORE REQUIREMENTS.....</b>	<b>16 CREDITS</b>
ACCT 1415, Budgeting for Decision Making, 3 cr	
SMGT 1115, Strategies for Personal Leadership, 3 cr	
SMGT 1125, Leadership Development and Ethics, 3 cr	
SMGT 1217, Foundations of Quality, 3 cr	
SMGT 1221, Decision Making and Problem Solving, 3 cr	
SMGT 1420, Documentation and Written Communication for Supervisors, 1 cr	

**TOTAL.....16 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Supervisory Leadership certificate program at RCTC, students will achieve the following outcomes:

- Select leadership and management skills needed to be an effective supervisor.
- Utilize interpersonal skills to build strong relationships between individuals, teams, and the organization as a whole.
- Practice critical thinking skills through decision-making, problem-solving, innovation, and continuous improvement activities.
- Analyze financial data from a supervisory perspective to make business decisions.

### **ADDITIONAL NOTES:**

**PURPOSE:** The Supervisory Leadership Certificate is an individually available component of the Supervisory Leadership A.A.S. Degree program. It is specifically designed to provide employed students with the skills necessary to be successful in a position of supervisory leadership. Courses in the certificate program focus on skills and techniques directly related to supervisory leadership issues.

Students will have the opportunity to increase their skills in leadership, interpersonal skills, workplace ethics, decision-making, quality and continuous improvement, and many more supervisory leadership related topics.

This program is structured to allow students to remain employed while attending classes on a part-time basis. Classes are scheduled primarily at night and on weekends. Upon approval students may transfer applicable transcribed course credits and/or experiential learning to satisfy required or elective program credits.

Revised: 04/07/2016

Implementation: Fall 2016

# RCTC PROGRAM PLAN

## SUPERVISORY LEADERSHIP: EMPLOYEE DEVELOPMENT

Certificate

### I. PROGRAM CORE REQUIREMENTS.....17 CREDITS

BUS 1307, Legal Issues for Supervisors, 3 cr

SMGT 1137, Leading Innovation and Change, 3 cr

SMGT 1225, Team Building and Facilitation Skills, 3 cr

SMGT 1327, Managing Employee Performance and Conflict, 3 cr

SMGT 1352, Recruiting, Retention and Employee Development, 4 cr

SMGT 1420, Documentation and Written Communication for Supervisors, 1 cr

**TOTAL.....17 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Supervisory Leadership: Employee Development certificate program at RCTC, students will achieve the following outcomes:

- Select leadership and management skills needed to be an effective supervisor.
- Utilize interpersonal skills to build strong relationships between individuals, teams, and the organization as a whole.
- Practice critical thinking skills through decision-making, problem-solving, innovation, and continuous improvement activities.
- Apply appropriate employment law to supervisory actions such as recruitment, hiring, performance management, and documentation.

### **ADDITIONAL NOTES:**

**PURPOSE:** The Employee Development Certificate is an individually available component of the Supervisory Leadership A.A.S. Degree program. It is specifically designed to provide employed students with the skills necessary to be successful in a position of supervisory leadership. Courses in the certificate program focus on skills and techniques directly related to employee development issues.

Students will have the opportunity to increase their skills in recruitment, retention, employee development, performance management, coaching, managing diversity, managing change and many more employee development related topics.

This program is structured to allow students to remain employed while attending classes on a part-time basis. Classes are scheduled primarily at night and on weekends. Upon approval students may transfer applicable transcripted course credits and/or experiential learning to satisfy required or elective program credits.

Revised: 02/08/2022

Implementation: Fall 2022

# RCTC PROGRAM PLAN

## SURGICAL TECHNOLOGY

Associate in Applied Science

<b>I. MINNESOTA TRANSFER CURRICULUM (MNTC)/</b>	
<b>GENERAL EDUCATION REQUIREMENTS.....</b>	<b>18-20 CREDITS</b>
<b>GOAL 1: WRITTEN AND ORAL COMMUNICATION .....</b>	<b>4 CR</b>
ENGL 1117, Reading and Writing Critically I, 4 cr	
<b>GOAL 3: NATURAL SCIENCES .....</b>	<b>11-12 CR</b>
BIOL 1217, Anatomy and Physiology I, 4 cr	
BIOL 1218, Anatomy and Physiology II, 4 cr	
CHEM 1101, Elements of Chemistry, 3 cr <b>or</b>	
CHEM 1117, General, Organic and Biological Chemistry I, 4 cr.	
<b>GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....</b>	<b>3-4 CR</b>
PSYC 1611, Psychology of Adjustment, 3 cr <b>or</b>	
PSYC 2618, General Psychology, 4 cr.	
<b>II. PROGRAM CORE REQUIREMENTS.....</b>	<b>42-44 CREDITS</b>
HCOP 1610, Medical Terminology: Body Systems and Diseases, 2 cr <b>or</b>	
HCOP 1620, Medical Terminology for Health Professions, 3 cr.	
AOP 2870, Employment Strategies, 1 cr	
NA 1610, Nursing Assistant for Surgical Technology, 5 cr <b>or</b>	
NA 1500, Nursing Assistant Theory and Clinical, 4 cr. <b>and</b>	
NA 1602, Hospital Nursing Assistant, 2 cr.	
ST 2110, Surgical Technology Medications and Microbiology, 3 cr	
ST 2120, Operating Room Techniques I, 5 cr	
ST 2121, Operating Room Techniques II, 5 cr	
ST 2122, Introduction to the Operating Room, 3 cr	
ST 2123, Surgical Procedures I, 9 cr	
ST 2124, Surgical Procedures II, 9 cr	
<b>TOTAL .....</b>	<b>60 CREDITS</b>

# RCTC PROGRAM PLAN

## **PROGRAM OUTCOMES:**

Upon completion of the Surgical Technology program at RCTC, students will achieve the following outcomes:

- Define and relate the principles underlying the profession of surgical technology, including anatomy and pathophysiology of the human body, microbiology, pharmacology, and operating room skills, techniques, instrumentation, equipment and supplies.
- Demonstrate knowledge and application of the principles of aseptic technique and basic case preparation skills primarily in the sterile role.
- Demonstrate practical skills required to work as a competent surgical technologist in the preoperative, intraoperative, and postoperative phases of surgical case management.
- Apply critical thinking skills for appropriate and safe care of the patient in the operating room.
- Demonstrate the role of a surgical technologist as part of an operating room team providing comprehensive care for patients.
- Demonstrate the practice according to the ethical principles and legal requirements of the profession of surgical technology.
- Demonstrate appropriate and professional skills of interpersonal communication with all patients and other members of the health care team.

## **NOTICE OF BACKGROUND STUDIES:**

Minnesota Statute 245C requires that students who have contact with individuals in licensed institutions complete an annual background study with the Minnesota Department of Human Services. Individuals who do not pass the background study will not be allowed to participate in clinical activities. A list of disqualifying offenses is available at <https://www.revisor.mn.gov/statutes/?id=245C.15>. Students in the program will also be required to complete a national criminal background study. Information about completing both background studies will be available from program faculty.

## **PROGRAM ENTRANCE REQUIREMENTS:**

General education credits must be completed prior to entering the Surgical Technology program. These include ENGL 1117, BIOL 1217, BIOL 1218, CHEM 1101 (or CHEM 1117), PSYC 1611 (or PSYC 2618), HCOP 1610 (or HCOP 1620), AOP 2870, and NA 1610 (or NA 1500 and NA 1602).

## **PROGRAM ACCREDITATION:**

The program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 9355 113th St. N, #7709, Seminole, FL 33775-7709 (Phone: 727-210-2350) in cooperation with the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA), 19751 E. Main Street, Suite 339, Parker, CO 80138 (Phone: 303-694-9262)

Revised: 11/09/2021

Implementation: Fall 2022

# RCTC PROGRAM PLAN

## TRADE READINESS

Certificate

### I. PROGRAM CORE REQUIREMENTS.....16 CREDITS

- AOP 2870 Employment Strategies, 1 cr.
- CR 1600, Carpentry Theory I, 3 cr
- CR 1610, Residential Blueprint Reading, 2 cr
- CR 1612, Shop Practice I, 2 cr.
- CR 1622, Carpentry Theory II, 3 cr
- CR 1632, Construction Estimating, 3 cr
- HLTH 1102 Industrial Safety and First Aid, 2 cr.

### TOTAL.....16 CREDITS

### **PROGRAM OUTCOMES:**

Upon completion of the Trades Readiness training at RCTC, learners will achieve the following outcomes:

- Show skills in communication, confident decision-making, and teamwork enabling students to work as a productive member of a construction crew.
- Demonstrate the safe use of the appropriate tools, materials, and techniques as required to carry out work on a building project.
- Read and interpret information from blueprints and specifications.
- Estimate materials and labor costs to complete a building project.
- Perform general carpentry skills, apply codes, and safety standards.
- Adapt a sense of pride, professionalism, and the desire to progress and excel in the construction trades.
- Build character and gain confidence to seek employment within the skilled trades.

### **ADDITIONAL NOTES:**

**PURPOSE:** Trade Readiness Certificate – as individuals seek a pathway into the construction industry, many will need to receive initial training like tool identification, construction math, safety, and employment strategies. This certificate will allow learners to obtain the necessary skills for entry level positions, union apprenticeships, or continued learning towards a diploma or degree.

Revised: 5/14/2023

Implementation: Fall 2023

# RCTC PROGRAM PLAN

## VETERINARY TECHNICIAN

Associate of Applied Science

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

**GENERAL EDUCATION REQUIREMENTS.....16 CREDITS**

**GOAL 1: WRITTEN AND ORAL COMMUNICATION .....3 CR**

COMM 1114, Fundamentals of Public Speaking, 3 cr **OR**

COMM 1130, Interpersonal Communication, 3 cr **OR**

ENGL 1117, Reading and Writing Critically I, 4 cr

**GOAL 3: NATURAL SCIENCES .....7 CR**

BIOL 1220, General Biology I, 4 cr

CHEM 1101, Elements of Chemistry, 3 cr

**GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR**

PSYC 1611, Psychology of Adjustment, 3 cr **OR**

Credits from MnTC Goal 5

**GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....3 CR**

**Choose one of the following courses:**

PHIL 1125, Ethics, 3 cr **OR**

Credits from MnTC Goal 6

**Required General Education courses must be completed with a grade of C or better.**

### II. PROGRAM CORE REQUIREMENTS.....59 CREDITS

MATH 1026, Mathematics for Vet Technicians, 1 cr

\*VT 1010, Veterinary Medical Terminology and Anatomy, 3 cr

\*VT 1110, Introduction to Animal Health Technology, 3 cr

VT 1220, Small Animal Nursing Techniques I, 3 cr

VT 1410, Veterinary Surgical Nursing and Anesthesia, 2 cr

VT 1510, Veterinary Office Procedures, 2 cr

VT 1610, Fundamentals of Diagnostic Imaging, 3 cr

VT 1710, Introduction to Veterinary Technology Field Experience, 2 cr

VT 1810, Parasitology, 2 cr

VT 1900, Small Animal Care and Management, 2 cr

VT 2020, Comparative Veterinary Anatomy and Physiology, 2 cr

VT 2230, Small Animal Nursing Techniques II, 3 cr

VT 2240, Small Animal Nursing Techniques III, 2 cr

VT 2250, Large Animal Procedures, 3 cr

VT 2260, Veterinary Surgical Nursing II, 2 cr

VT 2270, Laboratory Animal Care and Management, 3 cr

VT 2360, Veterinary Dentistry, 1 cr

VT 2720, Veterinary Technician Field Experience, 4 cr

# RCTC PROGRAM PLAN

VT 2820, Clinical Laboratory Techniques I, 3 cr  
 VT 2830, Clinical Laboratory Techniques II, 3 cr  
 VT 2900, Kennel Management and Nutrition, 2 cr  
 VT 2910, Pharmacology and Disease for Veterinary Technicians, 4 cr  
 VT 2920, Small Animal Disease and Diagnostics, 2 cr  
 VT 2930, Applied Pharmacology and Nutrition, 2 cr

**TOTAL ..... 75 CREDITS**

## **PROGRAM OUTCOMES:**

Upon completion of the Veterinary Technician program at RCTC, students will achieve the following outcomes:

- Participate in facility management utilizing traditional and electronic media and appropriate veterinary medical terminology and abbreviations.
- Communicate in a professional manner in all formats – written, oral, non-verbal, and electronic.
- Safely and effectively administer and dispense prescribed drugs to patients.
- Demonstrate and perform patient assessment techniques in a variety of animal species.
- Understand and demonstrate husbandry, nutrition, therapeutic and dentistry techniques appropriate to various animal species.
- Safely and effectively manage and maintain patients in all phases of anesthesia.
- Safely and effectively select, utilize and maintain anesthetic delivery and monitoring instruments and equipment.
- Understand and integrate all aspects of patient management for common surgical procedures in a variety of animal species.
- Understand and provide the appropriate instruments, supplies and environment to maintain asepsis during surgical procedures.
- Demonstrate knowledge of proper handling, packaging and storage of specimens for laboratory analysis to ensure safety of patients, clients, and staff.
- Properly perform analysis of laboratory specimens.
- Safely and effectively produce diagnostic radiographic and non-radiographic images.
- Safely and effectively handle common laboratory animals used in animal research.
- Understand the approach to providing safe and effective care for birds, reptiles, amphibians, guinea pigs, hamsters, gerbils, and ferrets.

## **ADDITIONAL NOTES:**

**PURPOSE:** The Veterinary Technology department offers one major option: Veterinary Technician A.A.S Degree. The Veterinary Technician Program is designed for students to complete some prerequisites in Veterinary Technology and after successful completion provide an opportunity to advance into the Veterinary Technician Applied Associate Degree. Courses are arranged in a sequential manner with a field experience component scheduled in the summer semester for the first year and the spring of the second year. All students begin the Veterinary Technician program in the spring semester of the academic year. Courses continue in an arranged sequential manner and are designed to combine theory with practical experience.

# RCTC PROGRAM PLAN

The Veterinary Technician curriculum is designed to prepare students for a career as a Veterinary Technician. Students are taught the skills and procedures to effectively contribute to the health and well-being of the animal patient. Veterinary Technicians are qualified to provide a diverse range of medical skills and responsibilities that include advance nursing care, anesthesia monitoring and induction, clinical laboratory testing and analysis, critical care support, surgery assisting, dental prophylaxis, radiographic imaging and client education.

**OCCUPATIONAL OBJECTIVES:** Training as a Veterinary Technician enables the student to work as professional technical support to veterinarians, biomedical researchers, and other scientists as well as positions in the pharmaceutical industries, animal control and humane organizations and local and state health departments. Opportunities for jobs exist in the following areas: Veterinary practice, Veterinary supply sales, Zoo/Wildlife Medicine, Diagnostic Laboratories, Biomedical research, Humane Societies, Military Service, Teaching, and Herd Health Managers.

## **ADMISSION: APPLICATION TO THE VETERINARY TECHNICIAN PROGRAM:**

1. Meet college admission requirements.
2. Complete RCTC Veterinary Technician application form.
3. Submit official transcripts from high school and college (if any) for evaluation.
4. Seek academic advisement to ensure that all pre-requisites are complete.
5. Application is valid for the current year only.
6. Application deadline is November 15. Only offering a spring start.
7. Thirty-six students will be admitted annually.
8. Should there be more qualified applicants than are spaces available, students will be admitted according to GPA ranking and a score on a program 50 point test given in the middle of fall semester.
9. Must have completed program prerequisites prior to entrance into the program.
10. Admittance will be conditional until fall grades have been finalized.

## **PROGRAM ENTRANCE REQUIREMENTS:**

**\*PREREQUISITES:** Successful completion of VT 1010, Veterinary Medical Terms and Anatomy; VT 1110, Introduction to Animal Health Technology; Written and Oral Communications (Goal 1); CHEM 1101, Elements of Chemistry; and MATH 1026, Mathematics for Vet Technicians. All VT and required general education courses must be completed with a grade of C or better in order to continue to the next semester of the program.

Revised: 2/16/2024

Implementation: Fall 2024



# RCTC PROGRAM PLAN

## ART + DESIGN: WEB DESIGN

Associate of Science Degree

### I. MINNESOTA TRANSFER CURRICULUM (MnTC)/

#### GENERAL EDUCATION REQUIREMENTS.....30 CREDITS

*Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas.*

#### GOAL 1: WRITTEN AND ORAL COMMUNICATION .....7 CR

COMM 1114, Fundamentals of Speech **OR**  
 COMM 1130, Interpersonal Communication, 3 cr  
 ENGL 1117, Reading and Writing Critically I, 4 cr

#### GOAL 3: NATURAL SCIENCES .....3 CR

Credits from MnTC Goal 3

#### GOAL 4: MATHEMATICS/LOGICAL REASONING.....3 CR

Credits from MnTC Goal 4

#### GOAL 5: HISTORY AND THE SOCIAL AND BEHAVIORIAL SCIENCES .....3 CR

Credits from MnTC Goal 5

#### GOAL 6: HUMANITIES - THE ARTS, LITERATURE AND PHILOSOPHY .....6 CR

ART 1111, Art History Survey I, 3 cr  
 ART 1112, Art History Survey II, 3 cr

#### MnTC GENERAL EDUCATION ELECTIVES.....8 CR

Credits chosen from courses meeting the MnTC Competencies in Goal areas 1-10.

### II. PROGRAM CORE REQUIREMENTS.....27 CREDITS

ART 1120, Computer as Creative Media, 3 cr  
 ART 1121, 2D Design, 3 cr  
 ART 1124, Graphic Design I, 3 cr  
 ART 1130, Digital Art I, 3 cr  
 ART 1184, Photography I, 3 cr  
 ART 1232, Web Design I, 3 cr  
 ART 1233, Web Design II, 3 cr  
 COMP 1731, Programming for the Internet, 3 cr  
 COMP 1741, JavaScript, 3 cr

### III. ELECTIVES.....3 CR

#### Choose one of the following:

ART 1223, Typography, 3 cr  
 ART 2230, Digital Art II, 3 cr  
 ART 2240, Motion Graphics I, 3 cr  
 COMP 1751, Mobile Application Development, 3 cr

# RCTC PROGRAM PLAN

**TOTAL ..... 60 CREDITS**

## **PROGRAM OUTCOMES:**

Upon completion of the Web Design program at RCTC, students will achieve the following outcomes:

- Utilize the Elements of Art, Principles of Design, or Principles of Usability in order to create functional and aesthetically appropriate compositions.
- Demonstrate fundamental technical skills in the creation and presentation of design.
- Evaluate the aesthetic quality, cultural significance, personal reaction, and historical context of digital art and graphic design.
- Evaluate the needs of the users to determine the correct contexts for solutions.
- Develop unique and innovative solutions using conceptual thinking.

## **ADDITIONAL NOTES:**

**PURPOSE:** The purpose of the Web Design A.S. Degree Program is to provide the first two years of experience for transfer to any higher education institution for careers in Web Design. There are many opportunities in Web Design careers such as designing the look-and-feel of web sites, developing web sites, creating web content for mobile devices, conducting usability and accessibility studies of web sites, and creating content for delivery over the web.

An articulation agreement has been established between Rochester Community and Technical College and Minnesota State University, Moorhead and Metropolitan State University. As a result, students will be able to transfer the Web Design Program as a package. Students will enter the transfer program at earning full credit for RCTC's two-year degree program.

Revised: 11/13/2018

Implementation: Spring 2019

# RCTC PROGRAM PLAN

## WELDING TECHNOLOGY

Certificate

### I. PROGRAM CORE REQUIREMENTS.....16 CREDITS

WELD 1001, Blueprint Reading, Process Theory and Safety, 4 cr

WELD 1002, SMAW-Shielded Metal Arc Welding, 3 cr

WELD 1003, Oxy-fuel Welding, Cutting and Braze Welding, 1 cr

WELD 1004, GMAW-Gas Metal Arc Welding, 3 cr

WELD 1005, GTAW-Gas Tungsten Arc Welding, 3 cr

WELD 1006, Welding Internship, 2 cr

**TOTAL .....16 CREDITS**

### **PROGRAM OUTCOMES:**

Upon completion of the Welding program at RCTC, students will achieve the following outcomes:

- Demonstrate safe set-up, start-up, usage, shut-down and maintenance of all welding related shop equipment.
- Demonstrate the fundamentals of SMAW, GTAW, GMAW, OFW-A, and PAC.
- Demonstrate critical workplace skills including teamwork, communication, and problem solving.
- Interpret blueprints in terms of line identification, view identification, dimensioning, tolerance and all the standard AWS weld symbols and abbreviations that will be found on fabrication drawings.

### **ADDITIONAL NOTES:**

**PURPOSE:** The purpose of the Welding Certificate is to provide a one semester intensive hands-on welding program that prepares students for employment in welding and fabrication. Students will develop skills in GMAW, GTAW, SMAW and OXY Fuel cutting/welding as well as blueprint reading, safety and quality with extensive welding lab experience and an internship.

Revised: 02/08/2022

Implementation: Fall 2022

# RCTC PROGRAM PLAN

## WORKPLACE COMMUNICATION

Certificate

<b>I. PROGRAM CORE REQUIREMENTS.....</b>	<b>6 CREDITS</b>
COMM 1130, Interpersonal Communication, 3 cr	
COMM 2130, Team/Small Group Communication, 3 cr	
<b>II. ADDITIONAL REQUIREMENTS.....</b>	<b>3 CREDITS</b>
<b>Select one course from the courses listed below:</b>	
COMM 1114, Fundamentals of Public Speaking, 3 cr	
COMM 2100, Intercultural Communication, 3 cr	
<b>TOTAL .....</b>	<b>9 CREDITS</b>

### PROGRAM OUTCOMES:

Upon completion of the Workplace Communication program at RCTC, students will achieve the following outcomes:

- Select appropriate communication choices for specific audiences.
- Demonstrate effective listening in diverse settings.
- Utilize strategies to reduce communication apprehension.

### ADDITIONAL NOTES:

**PURPOSE:** The Workplace Communication Certificate is targeted for those who wish to strengthen their “soft skills” via practical application of communication theory. Employees surveyed often report teamwork, conflict management skills, oral communication, and interpersonal skills are crucial to success in the workplace. The Workplace Communication Certificate will build foundations for employees, managers and supervisors to implement communication techniques and skills into their workplace and may help differentiate them from others in the competitive marketplace.

Revised: 03/11/2014

Implementation: Fall 2014

# *COURSE DESCRIPTIONS*

## ACCOUNTING

### ACCT 1101 Introduction to Accounting (MnTC 11)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers fundamental accounting terminology and techniques that are used in the business environment. The course will help students develop basic financial and analytical skills that will allow them to understand and evaluate accounting data. Topics include: generally accepted accounting principles, the accounting cycle, financial statements, accrual accounting, internal controls, inventory, and cost behavior. This course may be used as a foundation course for ACCT 2217, Financial Accounting. (Prerequisites: Appropriate score on the RCTC placement test into Read 0900).

### ACCT 1415 Budgeting for Decision Making

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to provide students with an understanding of how to prepare, understand and communicate budget information. The course will discuss financial management concepts, budget creation, along with tools and techniques to track spending and reporting budget information. These skills are essential for supervisors to be able to understand the role of budgeting in supervisory decision making. (Prerequisites: None).

### ACCT 1814 Payroll Accounting

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is intended to give students an understanding of the fundamental concepts underlying the United States federal employment tax code. The course will discuss the complexities payroll tax laws, payroll tax forms, and required accounting and reporting to comply with federal and state employment laws. This includes preparation of employment records, payroll registers, employee earnings records, time cards, and state and federal reporting requirements. (Prerequisites: ACCT 2217).

### ACCT 2217 Financial Accounting

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is an introduction to financial accounting concepts that includes analyzing, interpreting and recording transactions. The accounting cycle is covered for service and merchandising corporations. The course also includes the preparation of financial statements in accordance with Generally Accepted Accounting Principles (GAAP) using the accrual method of accounting, and emphasizes the effects of journalizing business transactions on the financial statements. Additional topics include accruals and deferrals, revenues, expenses, internal control, merchandise inventory, accounts receivable, fixed assets, long-term liabilities, and equity. (Prerequisites: None).

#### ACCT 2218 Managerial Accounting

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course consists of analyzing and preparing reports for internal use in the company's decision-making process. This course contains a study of cost accounting and managerial accounting principles including cost behavior, job order costing, process costing, cost-volume-profit relationships, standard costs, budgets, break-even, differential analysis, time value of money, performance indicators, and cash flow reporting. Managerial accounting emphasizes accounting concepts required in the strategic decision-making process. Managerial Accounting is a continuation of Financial Accounting in the study of accounting. (Prerequisites: ACCT 2217).

#### ACCT 2234 Computerized Accounting and Business Applications

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers the use of spreadsheet, database, presentation, word processing, and data analytics software to solve accounting and business related problems. Topics include designing, creating and enhancing worksheets and charts, using formulas and functions to perform calculations, printing, merging, and file management. There is an introduction to use financial statement and data analysis within the decision making process. (Prerequisites: None).

#### ACCT 2237 Accounting and Business Information Technology

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers the basic structure of integrated computerized accounting software. This software will perform basic accounting functions including general ledger, accounts receivable, accounts payable, payroll entries, depreciation, journal entries, and financial statements and analysis. Additionally, there is a continuation to creating and enhancing worksheets and charts using spreadsheet software. (Prerequisites: ACCT 2217).

#### ACCT 2801 International Study Abroad

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Students will explore international accounting and business practices through an international study abroad experience. The course will cover international reporting standards and how they differ from the United States generally accepted accounting principles. The course will focus on different user needs and how reporting and business models are different. Topics will include cash flow, revenue recognition, governmental reporting requirements, and cultural differencing that influence decision-making. (Prerequisites: None. Other Requirements: Students need to attend an international trip. Special fees and cost will be collected in addition to tuition for travel costs.)

#### ACCT 2836 Accounting and Database Applications

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers the set up and use of commercial integrated general ledger software. This includes the functions of general ledger, accounts receivable, accounts payable, payroll, job cost, time and billing, adjusting and closing entries, financial statements, and electronically

transferring information for management reporting. Additionally there is an introduction to database and income tax preparation software. (Prerequisites: ACCT 2234 and ACCT 2218 or concurrent enrollment or consent of instructor).

#### ACCT 2850 Accounting Internship

Credits and hours/week may vary. - [Common Course Outline](#)

Work experience program designed to help accounting students apply classroom information on the job. Designed to make the work experience a learning experience so that the student will be able to better understand the practical application of accounting techniques. Completion of one semester of Accounting, Business, or Economics courses is recommended. (Prerequisites: None. Other Requirements: Signed internship agreement).

## AUTOMOTIVE MECHANIC TECHNICIAN

#### AMT 1720 Electrical Theory

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course covers the service, diagnosis and repair of automotive electrical systems including starting and charging systems and electrical accessories. This course also covers the service, diagnosis, and repair of basic ignition systems as well as the necessary maintenance to keep ignition systems in good working order. (Prerequisites: None).

#### AMT 1725 Electrical Lab

4 credits: 8 hours lab/week - [Common Course Outline](#)

This course covers the service, diagnosis and repair methods of general automotive maintenance and the automotive electrical systems including starting and charging systems and electrical accessories. (Prerequisites: None).

#### AMT 1730 Brakes Theory

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course covers the theory and application of auto safety, tools, fasteners, basic electricity and general auto service. This course also covers theory, design, operation, diagnosis and repair of hydraulic brake systems on automobiles and light trucks. (Prerequisites: None).

#### AMT 1735 Brakes Lab

5 credits: 10 hours lab/week - [Common Course Outline](#)

This course covers the service, diagnosis, and repair methods of general automotive maintenance as well as the service, diagnosis and repair of hydraulic brake systems, ABS brake systems and rotor and drum machining/measuring. (Prerequisites: None).



#### AMT 1810 Engine Repair Theory

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers engine design as well as diagnosis, evaluation, repair, and maintenance steps involved in restoring gasoline automotive engines to good running order. (Prerequisites: None).

#### AMT 1815 Engine Repair Lab

7 credits: 14 hours lab/week - [Common Course Outline](#)

This course covers the diagnosis, repair procedure, and testing and maintenance procedures for automotive gasoline engines. (Prerequisites: None).

#### AMT 1820 Alignment & Suspension Theory

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course covers suspension design, alignment geometry and wheel and tire factors as well as recommended maintenance steps concerning suspension systems and related compounds. (Prerequisites: None).

#### AMT 1825 Alignment & Suspension Lab

3 credits: 6 hours lab/week - [Common Course Outline](#)

This course covers a diagnosis, evaluation, adjustment, and repair of suspension systems and related automotive components. (Prerequisites: None).

#### AMT 1900 Welding

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course covers theory and practice of oxy-acetylene, stick arc, and wire-feed welding. Students will learn theory and safety and have opportunity to learn and practice "hands on" welding and soldering skills. (Prerequisites: None).

#### AMT 2650 Auto Science

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course covers the basics of hydraulics, gear ratios, engine physics, and vehicle sensor theory and diagnosis related to current automobiles and light trucks. (Prerequisites: None).

#### AMT 2740 Drive Train Theory

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will cover automotive and light truck clutches, manual and automatic transmission/transaxles, differentials, and drivelines. Content includes mechanical, electronic, and hydraulic system, driveshaft phasing, alignment, balance gear ratios and diagnosis. All-wheel drive and 4-wheel drive systems. (Prerequisites: None).

#### AMT 2742 Manual Drive Train Lab

4 credits: 8 hours lab/week - [Common Course Outline](#)

This course is a hands-on lab class and will cover automotive and light truck clutches, manual and automatic transmission/transaxles, differentials, and drivelines. Content includes mechanical, electronic, and hydraulic system, driveshaft phasing, alignment, balance, gear ratios, and diagnosis. All-wheel drive and 4-wheel drive. (Prerequisites: None).

#### AMT 2744 Automatic Trans/Transaxle Lab

4 credits: 8 hours lab/week - [Common Course Outline](#)

This course is a hands-on lab class in which various transmissions and transaxles are diagnosed, basic overhaul techniques, are demonstrated, special tool and gauge usage are taught. Electronic controls and scan tool usage is covered extensively. (Prerequisites: None).

#### AMT 2750 Engine Performance Theory

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course covers a study of the theory and principles of operation of automotive fuel injection systems, electrical systems, and mechanical conditions related to engine performance and also the operating principles of automotive computers, sensors, and control devices. Extensive use of scan tools for diagnosis. (Prerequisites: None).

#### AMT 2752 Engine Performance Lab

7 credits: 14 hours lab/week - [Common Course Outline](#)

This course is a hands-on lab and includes diagnosing, servicing and correcting problems with automotive fuel injection systems, electronic systems, and mechanical conditions related to engine performance and the operating principles of automotive computers, sensors, and control devices. Scan tools for diagnostics are used extensively in this course. (Prerequisites: None).

#### AMT 2770 Heating and Air Conditioning

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course covers automatic temperature control systems operation, testing, and repairs of vacuum and electrical controls, airflow distribution, and heater system controls. It also will cover the diagnosis and repair of air condition components as well as types of refrigerants used. (Prerequisites: None).

## ANTHROPOLOGY

### ANTH 1612 Cultural Anthropology (MnTC 05, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

A study of the variety of human cultures along with their adaptations to physical, social and cultural environments in order to enable us to function and contribute in an increasingly multicultural world. A special emphasis will be placed on social, cultural, and religious elements. (Prerequisites: None).

## ADMINISTRATIVE OFFICE PROFESSIONAL

### AOP 1010 Computer Basics

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course covers an introduction in the use of the computer for information processing through demonstration, discussion, and hands-on experience with a PC computer. Students will do projects using word processing, spreadsheet, and database software. Keyboarding skills are recommended. (Prerequisites: None).

### AOP 1020 Keyboarding I

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course is designed to provide the student with the basic skills necessary to input and retrieve data from the computer through the use of the keyboard. Students will be taught the touch - type method of alphabetic (and numeric) keyboarding with great emphasis placed on accuracy. This course is designed for students who have no or minimal keyboarding skills. The pace of the course is individualized to the students' skills and abilities. College-level reading and writing skills are recommended. (Prerequisites: None).

### AOP 1030 Keyboarding II

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Students will identify and practice particular stroke combinations that are creating barriers to increasing speed and accuracy. Students will be completing skill-building lessons and working on simulated office documents. The pace of the course is individualized to the students skills and abilities. College-level reading and writing skills are recommended. Student must be at 35 GWPM or more to enroll in this course. (Prerequisites: AOP 1020).

#### AOP 1101 Microsoft Windows and Office Fundamentals

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to introduce the student to fundamental office tasks and environments. Students will utilize the Windows operating system to create an organized, digital workspace. Telephone etiquette and professional traits will be emphasized. (Prerequisites: None).

#### AOP 1320 Microsoft Word

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course teaches utilization of Microsoft Word to create and edit business documents such as agendas, meeting minutes, memos, letters, envelopes, labels, and reports. Tasks will include document layout and design, proofreading and editing, file storage and retrieval, and merging documents with stored variables. Emphasis will be placed on critical thinking skills in the editing and production of documents. (Prerequisites: None).

#### AOP 1360 Microsoft Excel

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will introduce the student to basic and intermediate Microsoft Excel skills. Students will create worksheets and workbooks, utilize basic formulas and functions, format worksheets into easy to read reports, and visually represent data using charting and design tools. Beginning data analysis tools will be covered, as well. (Prerequisites: None).

#### AOP 1370 Microsoft Access

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course will introduce the student to basic Microsoft Access and database skills. Students will create tables and forms, create and run simple queries, and format reports. Beginning data analysis tools will be covered. (Prerequisites: None).

#### AOP 2220 Business Communications

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides the student with an introduction to theory-based principles of both oral and written communication utilized in business. Emphasis is placed upon grammatically correct, professionally formatted business documents, and appropriate tone and method of communication. (Prerequisites: ENGL 1630 or ENGL 1117).

#### AOP 2270 Integrated Office Procedures

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course capstones the administrative office professional's duties that students will experience in any office setting. Students will integrate and reinforce skills taught in previous Administrative Office Professional courses. The student will work on simulated office projects and tasks, identify and solve current office challenges utilizing technology, and produce error-free, professional communication. Students will learn to set priorities and employ time management skills. (3 C). (Hours per week: 3 hours lecture). (Prerequisites: AOP 1320, AOP 1360, AOP 2614, and ENGL 1630).

#### AOP 2330 Advanced Microsoft Word

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Students will utilize Microsoft Word to create and edit advanced documents including, but not limited to, grants, manuscripts, reports, newsletters, executive summaries, business plans, news releases, manuals, research papers, and various personnel documents. Proofreading and editing will be an integral part of the course. Students will be utilizing advanced features to create organized, error-free documents with visual appeal. (Prerequisites: AOP 1320).

#### AOP 2350 Microcomputer Business Applications

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to give students the competitive edge in any business or industry by providing hands-on instruction using computer applications as business productivity tools. Students will develop word processing, spreadsheet/database management, and presentation skills using Microsoft Word, Excel, Access, and PowerPoint. (Prerequisites: None).

#### AOP 2360 Advanced Microsoft Excel

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed for continued development of advanced spreadsheet knowledge and skills using Microsoft Excel. Students will be utilizing Microsoft Excel tools to analyze data, present data in a useable format, and validate data methods. Critical thinking and analysis skills will be utilized to make data-informed decisions. Integrating with other programs will be covered. (Prerequisites: AOP 1360).

#### AOP 2370 Advanced Microsoft Access

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on the advanced features of Microsoft Access. Students will create multiple tables, advanced queries, forms, and reports. Students will analyze database performance and table structures. Utilizing Microsoft Access in data analysis will be covered. (Prerequisites: AOP 1370).

#### AOP 2614 Customer Relations Management

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces students to customer relations management strategies, focusing on retention and professional communication. Customer relations tools and techniques will be utilized to create positive experiences for internal and external customers. Students will assess their own skill level and create a customer relations improvement plan. (Prerequisites: None).

#### AOP 2617 Microsoft Outlook and Meeting Planning

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on the collaborative use of Microsoft Outlook including electronic mail, calendars, contacts, tasks, and email etiquette. Students will utilize additional tools for successful meeting planning and management. Virtual meetings and collaboration with colleagues will be covered. (Prerequisites: None).

#### AOP 2622 Multimedia and Collaborative Technology

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will prepare students to work in today's digital world where mobility, flexibility, and collaboration are integral. The student will research and utilize web-based multimedia tools to produce a webpage, blog, and various presentations. Students will work collaboratively with other students in virtual collaboration applications. Students will be introduced to Google productivity applications, Microsoft PowerPoint, and other innovative technologies. (Prerequisites: None).

#### AOP 2630 Emerging Technologies

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will prepare students to research and apply today's most current technologies to solve existing office challenges. Students will master concepts and employ critical thinking skills that are essential for success in today's digital world. Students will be asked to proactively create plans, processes, and procedures to implement today's emerging technology to solve advanced office tasks, including social media, Adobe, and Microsoft productivity tools. (Prerequisites: None).

#### AOP 2840 AOP Internship I

2 credits: hours/week may vary - [Common Course Outline](#)

This internship provides students the opportunity to earn credit for work experience related to their career objectives. Students will apply concepts and skills learned through AOP program coursework in an active office environment. (Prerequisites: Successfully completed AOP 1030, AOP 1320, AOP 1360, AOP 2614, AOP 2617, and AOP 2870).

## AOP 2870 Employment Strategies

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course offers a highly individualized approach to developing job-seeking skills. The student will create a professional resume, cover/application letter, thank you letter, and reference list. Electronic job application completion and follow-up techniques will be covered. Effective interviewing skills will also be addressed. It is strongly recommended students have successfully completed at least half of their program credits before taking this course. (Prerequisites: None).

## ART

### ART 1010 Introduction to Art (MnTC 06)

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is an introduction to Studio Arts for all students. Basic concepts of the visual arts will be explored through the creation of 2D and 3D works. Media may include drawing and painting, sculpture, ceramics, photography, design and digital arts. Exploration and experimentation will lead toward the familiarity of materials and techniques necessary for individual and cultural expression. (Prerequisites: None).

### ART 1110 Art Appreciation (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introductory exposure to art and to ideas about art and its creation. We will discuss the nature of art, explore the elements of art and principle of design, study a variety of art media and techniques, and examine major monuments and works of art from prehistoric through contemporary times. There will be a museum activity. (Prerequisites: None. Other Requirements: None).

### ART 1111 Art History Survey I (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introductory survey of the visual arts (painting, sculpture, architecture, decorative arts, and utilitarian objects) from prehistoric times through the fourteenth-century. We will examine works of art from both Western and non-Western civilizations. This course includes lectures, discussions, and student-led presentations. (Prerequisites: None).

**ART 1112 Art History Survey II (MnTC 06, 08)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introductory survey of the visual arts (painting, sculpture, architecture, decorative arts, and utilitarian objects) from the 14th century through the present time. We will examine works of art from both Western and non-Western civilizations. This course includes lectures, discussions, and student-led presentations. (Prerequisites: None).

**ART 1120 Computer As Creative Media (MnTC 06)**

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is an introduction to creating vector-based illustrations. Students will explore the principles of design, expressing form, problem solving, and using the computer as a medium. Projects will be created using Adobe Illustrator and other vector applications or methods. (Prerequisites: None).

**ART 1121 2D Design (MnTC 06)**

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is a foundation course in two-dimensional design and color. It is a basic exploration of the visual elements and principles of design using a wide variety of media and techniques. This course emphasizes the elements, principles, and ideas that constitute the shared language of all the visual arts. (Prerequisites: None).

**ART 1123 3D Design (MnTC 06)**

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is a foundation course in three-dimensional design. Students will explore the elements and principles of design using a variety of sculptural media and construction methods. Students will develop an informed personal reaction and critical response to sculptural works of art. This course emphasizes the elements, principles, and ideas that constitute the shared language of all the visual arts. (Prerequisites: None).

**ART 1124 Graphic Design I (MnTC 06)**

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is an introduction to graphic design. Students will implement the principles of design to combine typography, illustration, symbols, and photographs to solve visual problems. This course will explore historical design styles and place graphic design into an art historical context. (Prerequisites: None).



**ART 1130 Digital Art I (MnTC 06)**

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is an introduction to creating pixel raster based compositions. Students will explore conceptual thinking, expressing content, the principles of design, and using the digital medium to create artworks and edit photographs. Projects will be created using Adobe Photoshop and other supportive creative raster apps. (Prerequisites: None).

**ART 1134 Drawing I (MnTC 06)**

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This studio art course covers the basic ideas, methods, and materials of drawing as a means of expression in the visual arts. Working primarily from observation students will explore the basic problem of representing form and space on a two-dimensional surface. Students will engage in the creative process using traditional and contemporary methods. An informed and critical response to class work will be fostered. Aesthetic judgements and a visual vocabulary are developed in a format of regular critical analysis. (Prerequisites: None).

**ART 1144 Painting I (MnTC 06)**

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This studio art course covers the basic ideas, methods, and materials of painting as a means of expression in the visual arts. Students use the oil media to explore basic problems of color, form, and composition using traditional and contemporary methods. Students will engage in the creative process. An informed personal reaction and critical response to class work will be fostered. (Prerequisites: None).

**ART 1164 Ceramics I (MnTC 06)**

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This studio art course covers the basics of hand building and wheel throwing forming methods as means of expression in the visual arts. The ceramic process will be used to explore basic problems of form in three dimensions using traditional and contemporary methods. Students will engage in the creative process. An informed personal reaction and critical response to work will be emphasized. (Prerequisites: None).

**ART 1184 Photography I (MnTC 06)**

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is an introduction to creative digital photography. Students will make photographs that explore fundamental compositional strategies using digital cameras and editing software. Instruction will include the exploration of photographic concepts through media presentations, group discussions, and video tutorials. Additional instruction will cover the history of photography, and computer techniques. Students will learn to interpret and analyze images, including student work through classroom critiques and discussions. (Prerequisites: None. Other Requirements: None).

#### ART 1212 Figure Drawing (MnTC 06)

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This studio art course focuses on drawing the human figure. Students will primarily work from the model both nude and clothed. This course allows the students to expand their knowledge of historical viewpoints, media exploration and contemporary art issues as they relate to the figure. (Prerequisites: None).

#### ART 1223 Typography

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is an introduction to the fundamentals of typography. It is a basic overview of the structure, history, theories, and use of type. Students will learn to identify and classify typefaces. Design of letterforms and visual symbols will be developed through projects. (Prerequisites: None).

#### ART 1232 Web Design I (MnTC 06)

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is an introduction to designing for the web. Students will approach web design in this course within a visual design framework. Students will implement the Principles of Design by combining images, typography, color schemes, layouts, and branding to user interfaces that provide compelling visually interactive user experiences. This course explores the artistic visual aspects of web design. ART 1233 Web Design II follows this course with coding and technical implementation of web design projects. (Prerequisites: None).

#### ART 1233 Web Design II

4 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course builds on its prerequisite, ART 1232 Web Design I. This course is an introduction to the technical aspects of web design. Using sample prototype designs as a model and relevant mark-up coding languages, students will develop functional websites in web development applications and experience publishing their developed web design projects onto a web server. (Prerequisites: ART 1232).

#### ART 1290 Media Arts (MnTC 06)

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course will introduce students to contemporary Media Arts which includes photography, audio, video, and multimedia. Students will learn to use Media Arts technology to create and communicate. The course will explore critical and historical concepts relevant to both mass communication and art & design production. Digital technology used will include appropriate editing software and web-content tools. Students will use various media arts together to create narrative media projects focused on storytelling. (Prerequisites: None. Other Requirements: College level reading and writing skills).

### ART 1337 Art and Code (MnTC 06)

3 credits: 1 hour lecture/week - 4 hours lab/week – [Common Course Outline](#)

This course introduces concepts in design and art by using open-source graphic software libraries meant to teach programming to visual artists and new computer programmers. This course explores the elements of art and principles of design by using the basic concepts of computer programming, such as variables, control structures, arrays, loops, functions, and objects. There will be an emphasis on procedural approaches that incorporate simple chance, randomness, or probability into designs. There will also be discussion of the current state of generative art and art historical precedents for working procedurally. This course is geared toward students with no programming experience. (Prerequisites: None).

### ART 2224 Graphic Design II

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course builds on ART 1124, Graphic Design I. The class further sharpens visual conceptualization and technical skills in graphic design. Students will systematically research client needs, brainstorm ideas, conceptualize solutions, and solve visual problems using the principles of design. Students will then create designs leading to the production of portfolio quality pieces. Projects will focus on one or more of the disciplines of Graphic Design. (Prerequisites: ART 1124. Other requirements: None).

### ART 2230 Digital Art II

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course builds on ART 1130, Digital Art I. This course further advances the creation of art using the computer. Students will engage in conceptual thinking and refine technical skills in using the digital medium to create artworks and edit photographs. Projects will be created using Adobe Photoshop, Adobe Illustrator, and other software applications and methods. (Prerequisites: ART 1130. Other requirements: None).

### ART 2234 Drawing II

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This studio art course builds on the basic methods and ideas of Drawing I. This course transitions from assignment-based projects to independent and cohesive work. Students will experiment with historic and contemporary methodologies and media. Color media and related techniques will be introduced and explored. Focus is on problem solving and the creative process. Students will further develop an aesthetic response to their work, the work of the class, and to art in general. (Prerequisites: ART 1134. Other Requirements: None).

### ART 2240 Motion Graphics I

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course introduces the fundamentals of animation, visual effects, and cinematic techniques to create motion graphics. Students will explore the tools and principles of creating effective motion graphics assets and projects. (Prerequisites: None. Other Requirements: None).

### ART 2244 Painting II

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This studio art course builds on the basic methods and ideas of Painting I. This course transitions from assignment-based projects to independent and cohesive work. Students will experiment with historic and contemporary methodologies and media. Color media and related techniques will be introduced and explored. The focus is on problem solving and the creative process. Students will further develop an aesthetic response to their work, the work of the class, and to art in general. (Prerequisites: ART 1144. Other Requirements: None).

### ART 2264 Ceramics II

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course builds on the basic methods of Ceramics I while allowing greater breadth and depth of individual creative exploration. Additional hand building and wheel throwing methods and forms will be covered. Ceramic raw materials, kiln loading and firing are introduced. Aesthetic judgments, historical perspectives and visual vocabulary continue to be developed in a format of regular critical analysis. (Prerequisites: ART 1164).

### ART 2280 Photography II

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course expands on skills covered in ART 1184. Instruction will include digital photography best practices, the fine digital print, and the creation of an extended body of related images. Assignments will direct students toward personal expression in digital photography. Media presentations, discussion and studio critiques will address photographic theory and history, interpretation and analysis. (Prerequisites: ART 1184. Other Requirements: None).

### ART 2281 Professional Portfolio

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course prepares students for future study or careers in the fields of Art and Design. Students will develop a personal portfolio of art or design work, prepare supplementary materials, and complete a digital portfolio of their work. History lectures will focus on major themes in the History of Photography, while students will research and present on artists of influence related to their own work in their chosen field. This course emphasizes principles of professionalism to prepare students for their future artistic endeavors. Students should have taken at least one college level studio art course before taking this course. (Prerequisites: None).

### ART 2286 Photo Lighting Techniques

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course emphasizes artificial photographic lighting as a creative and practical means to create images for artistic and commercial purposes. Studio, strobe, and off-camera flash will be introduced to photograph a variety of subject matter including: still life, portraiture, tabletop, and on-location environments. Media presentations, video tutorials, discussions, and studio critiques will address photographic technique, theory and history, interpretation and analysis. Students will work in groups in the photo studio to produce work throughout the semester. (Prerequisites: ART 1184).

### ART 2292 Directed Studio

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course provides students the opportunity to engage in an extended artistic project of their choosing. Students will propose a semester plan of action and will meet both individually, and with the entire Directed Studio cohort for common critiques to review work at specific times during the semester. Students should have taken at least one foundation studio in the area in which they intend to work. The course requires students to work independently on their project, meeting regularly with the instructor to assess progress. These meetings will include individual assignments that may include research, video tutorials, and artistic practice. (Prerequisites: None. Other Requirements: Permission of Instructor).



## AMERICAN SIGN LANGUAGE

### ASL 1107 American Sign Language I (MnTC 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

An introduction to the Signing Naturally Series. This course will take students who have no knowledge of Sign Language to the point where they can function comfortably in a wide variety of situations in the deaf community. Deaf culture is taught throughout the curriculum. Level I will introduce language concepts related to people, places, and things within the immediate environment. (Prerequisites: None).

### ASL 1108 American Sign Language II (MnTC 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a continuation of ASL 1107. The course will build upon vocabulary and grammar, history of ASL and the Deaf/deaf community, and Deaf Culture aspects. The course is designed to encourage students to communicate in the target language learned in level 1 in an abstract and conceptual thought process in and out of the classroom environment. Students will learn and demonstrate the ability to converse on various topics, past, present and future. Students will also learn and demonstrate appropriate deaf culture norms (directing and maintaining attention and when communicating in ASL; keeping others informed; and following cultural conversation norms in the deaf community). College level reading and writing skills as demonstrated by appropriate RCTC placement test score or completion of appropriate developmental course(s). (Prerequisites: ASL 1107).

## AVIATION

### AVIA 1100 World of Aviation

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Students will explore the history of the aviation industry including an overview of powered flight and the associated economic, legal, structural, and competitive characteristics. Students will examine and analyze aviation regulatory processes. The analysis will provide students a better understanding of the contents of CFR 14, the processes involved in regulatory rulemaking and legislation, and a review and understanding of enforcement actions and processes. (Prerequisites: None).

### AVIA 1200 Private Pilot Ground

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers the prerequisites specified in Federal Aviation Regulations, Part 61 for a private pilot written test. Topics include aerodynamics, airplane systems, airports, airspace communications, Federal Aviation Regulations, navigation, aircraft performance, flight planning and flight physiology. Requires current medical certificate and admission to the program. (Prerequisites: None).

### AVIA 1210 Private Pilot Lab

1 credit: 2 hours lab/week - [Common Course Outline](#)

This course along with AVIA 1211 will provide the knowledge and skill necessary to earn a Federal Aviation Administration (FAA) Private Pilot Certificate with Airplane Single-Engine category and class ratings. This lab includes 15 hours of one-on-one ground instruction, along with 15 hours of actual flight training in an airplane or flight training device with an FAA Certified Flight Instructor or solo to gain the level of proficiency required to pass the FAA Private Pilot practical test. Instruction includes requirements as listed in the Federal Aviation Regulations. (Prerequisites: None) (Other Requirements: AVIA1200 must be taken as a pre-requisite or co-requisite. Requires current medical certificate and airport security clearance.)

### AVIA 1211 Private Pilot Lab II

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course along with AVIA 1210 will provide the knowledge and skill necessary to earn a Federal Aviation Administration (FAA) Private Pilot Certificate with Airplane Single-Engine category and class ratings. This lab includes 30 hours of one-on-one ground instruction, along with 30 hours of actual flight training in an airplane or flight training device with an FAA Certified Flight Instructor or solo to gain the level of proficiency required to pass the FAA Private Pilot practical test. Instruction includes requirements as listed in the Federal Aviation Regulations. (Prerequisites: None) (Other Requirements: AVIA 1210 must be taken as a pre-requisite or co-requisite. Requires current medical certificate, airport security clearance, and program approval to register.)

### AVIA 1300 Aviation Weather

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers weather elements, how weather is produced, and how weather affects aviation. A climatological approach is used to develop an understanding of the weather elements and their distribution over the Earth. Aviation specific hazards including convective weather, icing, visibility, and wind are also studied. (Prerequisites: None).

### AVIA 1310 Instrument Ground

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is the advanced instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Includes Federal Aviation Regulations, instrument approach procedures, and instrument enroute considerations. Requires completion of all prerequisite program courses with a C or better. (Prerequisites: AVIA 1200).

### AVIA 1320 Instrument Pilot Flight Lab

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course along with AVIA 1321 will provide the knowledge and skill necessary to earn a Federal Aviation Administration (FAA) Instrument Pilot Rating. This lab includes 20 hours of one-on-one ground instruction along with 20 hours of flight training in an airplane or flight training device with an FAA Certified Flight Instructor or solo to gain the level of proficiency required to pass the FAA Instrument Rating practical test. Instruction includes requirements as listed in the Federal Aviation Regulations. Requires current medical certificate, airport security clearance, completion of prerequisite program courses with a C or better and program approval to register. (Prerequisites: AVIA 1200, AVIA 1210, and AVIA 1211).

### AVIA 1321 Instrument Pilot Flight Lab II

1 credits: 2 hours lab/week - [Common Course Outline](#)

This course along with AVIA 1320 will provide the knowledge and skill necessary to earn a Federal Aviation Administration (FAA) Instrument Pilot Rating. This lab includes 15 hours of one-on-one ground instruction along with 15 hours of flight training in an airplane or flight training device with an FAA Certified Flight Instructor or solo to gain the level of proficiency required to pass the FAA Instrument Rating practical test. Requires current medical certificate, airport security clearance, completion of prerequisite program courses with a C or better and program approval to register. (Prerequisites: AVIA 1310 and AVIA 1320).

### AVIA 2100 Air Navigation

3 credits: 3 hours lecture/week - [Common Course Outline](#)

A study of fundamental air navigation principles and how they are applied to flight, pilotage and dead reckoning, charts and conformal projects. Includes a study of the nation's air traffic control system; focusing on basic air traffic control procedures and regulations, Federal Aviation Administration control facilities, Flight Service Station services, radio communication, navigation principles, safety, and new developments. (Prerequisites: None).

### AVIA 2110 Aviation Safety

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides students with an overview of factors related to the safe and efficient operation of aircraft. Pilot performance, aircraft design, environmental factors, and the operating environment will be examined as they relate to accident cause and prevention. The student will learn how to analyze and mitigate risk through the use of a safety management system. (Prerequisites: None).



### AVIA 2115 Theory of Flight

3 credits: 3 hours lecture/week - [Common Course Outline](#)

A study of physics and aerodynamic principles of flight and propulsion systems. The nature of aerodynamic forces, flight principles of lighter-than-air, airplane, glider, rotocraft and powered lift are covered in detail. Requires completion of prerequisite program course AVIA1310 with a C or better. (Prerequisites: AVIA 1210, PHYS 1101).

### AVIA 2200 Commercial Pilot Ground

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Advanced commercial rating ground school course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical test and the Commercial Pilot written examinations. Includes commercial pilot Federal Aviation Regulations, advanced meteorology, advanced airplane systems, advanced radio navigation, physiology of flight, advanced weather, flight planning and commercial maneuvers. Requires completion of prerequisite program courses with a C or better. (Prerequisites: AVIA 1310).

### AVIA 2250 Commercial Pilot Lab

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course provided advanced commercial rating ground preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical test and the Commercial Pilot written examinations. Includes commercial pilot Federal Aviation Regulations, advanced meteorology, advanced airplane systems, advanced radio navigation, physiology of flight, advanced weather, flight planning and commercial maneuvers. Requires current medical certificate, airport security clearance, completion of prerequisite program courses with a C or better and program approval to register. (Prerequisites: AVIA 1321).

### AVIA 2251 Commercial Pilot Lab II

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course along with AVIA 2250 will provide the knowledge and skill necessary to earn a Federal Aviation Administration Commercial Pilot License. This lab includes 28 hours of one-on-one ground instruction along with 27 hours of flight training in an airplane or flight training device with an FAA Certified Flight Instructor or solo to gain the level of proficiency required to pass the FAA Commercial Pilot practical test. Instruction includes requirements as listed in the Federal Aviation Regulations. Requires current medical certificate, airport security clearance, completion of prerequisite program courses with a C or better, and program approval to register. (Prerequisites: AVIA 2200, AVIA 2250).

#### AVIA 2253 Commercial Multi-Engine Lab

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course will provide the knowledge and skill necessary to earn a Federal Aviation Administration (FAA) Multi-Engine Commercial Rating. This lab includes instruction in multi-engine operation, 12 hours of one-on one ground instruction and 15 hours of flight instruction an airplane or flight training device with an FAA Certified Flight Instructor or solo to gain the level of proficiency required to pass the FAA Multi-Engine Commercial practical test. Instruction includes requirements as listed in the Federal Aviation Regulations. Requires current medical certificate, airport security clearance, completion of prerequisite program courses with a C or better and program approval to register. (Prerequisites: AVIA 2200, AVIA 2250, and AVIA 2251).

#### AVIA 2350 Advanced Aircraft Systems

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers hydraulic, pneumatic, electrical, pressurization, environmental, and other systems for large-transport category aircraft. Turbine engines, primary and secondary flight controls, and miscellaneous important systems are examined. Examples of systems in large transport-category jets will be discussed from the pilot operational perspective. Requires completion of prerequisite program courses with a C or better. (Prerequisites: AVIA 2100, AVIA 2110, and AVIA 2115).

#### AVIA 2450 Aviation Human Factors

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a study of various techniques designed to enhance management and leadership methods. Emphasizes decision-making and judgment skills as well as methods to improve effective communication and skills to develop a productive work environment for flight crew and other airline personnel. Requires completion of prerequisite program courses with a C or better. (Prerequisites: AVIA 2100, AVIA 2110, AVIA 2115).

#### AVIA 2600 Flight Instructor Ground

2 credits: 4 hours lab/week - [Common Course Outline](#)

Flight instructor ground school course in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor practical test and the Certified Flight Instructor written examinations. Includes Federal Aviation Regulations, learning the flight instructor role, demonstrating maneuvers, gaining proficiency demonstrating and explaining maneuvers, refining instructions skills and demonstrating instructional competence. Requires completion of prerequisite program courses with a C or better. (Prerequisites: AVIA 2200, AVIA 2250, and AVIA 2251).

## AVIA 2610 Flight Instructor Lab

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course will provide the knowledge and skill necessary to earn a Federal Aviation Administration Flight (FAA) Instructor License. This lab includes instruction in teaching techniques, 16 hours of one-on-one ground instruction and 25 hours of flight instruction on an airplane or flight training device with an FAA Certified Flight Instructor or solo to gain the level of proficiency required to pass the FAA Flight Instructor practical test. Instruction includes requirements as listed in the Federal Aviation Regulations. Requires current medical certificate, airport security clearance, completion of prerequisite program courses with a C or better and program approval to register. (Prerequisites: AVIA 2200, AVIA 2250, and AVIA 2251. Other Requirements: Requires current medical certificate, airport security clearance, not PSEO eligible).

## BIOLOGY

### BIOL 1100 Environmental Biology (MnTC 03, 10)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This is a one-semester course that introduces students to applied aspects of environmental science. It provides students with a broad overview of the scientific and social aspects of human impact on the environment, interrelationships among organisms and their physical environment, and current issues in environmental science. Students will examine humans' role in the natural world, the impact of the growth of the human population, and the increase in humans' technological ability to make changes in the world. Students will be encouraged to explore societal, political, economic and personal value systems with regard to environmental issues. (Prerequisites: None).

### BIOL 1101 Elements of Biology (MnTC 03, 09)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

A one-semester course for non-science majors that blends traditional and contemporary biological concepts for understanding life in today's world. Science and the scientific method, the nature of life, cell structure and function, cell reproduction, genetic inheritance, human genetic analysis, biotechnology, and evolution are covered. Students will evaluate ethical issues of some biological, genetic, and biotechnology applications. This course will serve as an introduction to cellular biology to prepare for further study in biology-related or health-related fields. Lab attendance is mandatory. (Prerequisites: None).

### BIOL 1102 Plant Biology (MnTC 03, 10)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course covers the fundamentals of plant biology, focusing on the various types of plants and the basic anatomy and physiology of plants. The course is also designed to promote an awareness of the significance of plants in the natural processes of our biosphere and

specifically for humans. Students will be challenged to think about the importance of plants in decision-making, from individual, ethical choices to social, economic and policymaking choices. (Prerequisites: None).

#### BIOL 1107 Fundamentals of Anatomy & Physiology (MnTC 03)

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This one-semester course provides a comprehensive overview of introductory human anatomy and physiology of the major body systems. The course introduces students to biological molecules, cells, tissues, and organ systems of the human body and incorporates anatomical terminology. The laboratory curriculum does not include physical dissection of organisms. (Prerequisites: None).

#### BIOL 1110 Human Biology (MnTC 03)

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a one semester study of the biology of the human body. Each of the component systems will be studied in order to develop an understanding of how each part contributes to the whole. This knowledge will be applied to the analysis of current health and social issues. Laboratory sessions are designed to correlate with lecture topics. Dissection of appropriate animal specimens is included. (Prerequisites: None).

#### BIOL 1200 Introduction to the Clinical/Research Laboratory

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is for students currently employed in or ultimately seeking employment in a clinical or research laboratory with a health care focus. This course is specifically designed for students in the Biotechnology and Laboratory Science programs at RCTC. The goal of this course is to familiarize the student with key confidentiality, documentation, and safety issues encountered when working with patient samples in a clinical or research laboratory. (Prerequisites: None).

#### BIOL 1211 Principles of Nutrition

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on the science of foods and provides knowledge and awareness of how the structure and function of these foods contribute to the nutritional requirements and processes of the human body. Specific emphasis is placed on understanding the body's biological requirements in order to maintain structural materials and energy balance and regulate the growth and repair of tissues throughout the lifetime. This course will enable students to establish a foundation from which they can draw upon to not only make informed nutritional choices but to also understand the role of nutrition in personal, societal, and global issues. (Prerequisites: BIOL 1217 or BIOL 1220; one college Chemistry course higher than CHEM 1101).

**BIOL 1215 Anatomy and Physiology of the Cardiovascular, Lymphatic and Immune Systems**

1 credits: 12 hours lecture/week - 8 hours lab/week - [Common Course Outline](#)

This course covers the anatomy and physiology of the cardiovascular, lymphatic, and immune systems. This course is designed for transfer students whose previous coursework has met some, but not all, of the content areas for BIOL 1217. College level reading and writing skills required. (Prerequisites: By instructor permission only).

**BIOL 1216 Anatomy and Physiology of the Nervous & Respiratory Systems (MnTC 03)**

2 credits: 1.5 hours lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course will cover in detail the anatomy and physiology of the nervous and respiratory systems. (Prerequisites: BIOL 1110, CHEM 1101).

**BIOL 1217 Anatomy & Physiology I (MnTC 03)**

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is part one of the two-semester Anatomy and Physiology sequence. The course focuses on cell structure and function, tissues, chemistry as it relates to biological function, metabolism, and major organ systems including the integumentary system, muscular and skeletal systems, cardiovascular system and blood and lymphatic and immune systems. (Prerequisites: CHEM 1101 or a score of 100 on the CHEM 1117/BIOL 1217 ready test).

**BIOL 1218 Anatomy & Physiology II (MnTC 03)**

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is the second part of the two-semester Anatomy and Physiology sequence. This course covers the nervous, respiratory, digestive, urinary, endocrine, and reproductive systems. Metabolism and fluid, acid/base, and electrolyte balance are also discussed. (Prerequisites: BIOL 1217 and prior completion or concurrent enrollment in CHEM 1117).

**BIOL 1219 Anatomy and Physiology of the Nervous System**

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course will cover in detail the anatomy and physiology of the nervous system. (Prerequisites: BIOL 1217, CHEM 1117).

**BIOL 1220 General Biology I (MnTC 03, 10)**

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is one of two introductory courses in biology. It is a cellular-based approach to the foundational principles of biology, and it addresses basic life processes at molecular, cellular, tissue, and organismal levels, principles of evolution, and interactions among organisms. (Prerequisites: None).

**BIOL 1230 General Biology II (MnTC 03)**

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is one of two introductory biology courses. It is an organism-based study of the evolutionary history and diversity of living organisms. The course addresses how organism structures and functions are related to how they carry out basic life processes (e.g., gas exchange, nutrition). Students study the comparative anatomy and physiology and evolutionary relationships among organisms, addressing key adaptations to survival of selected organisms. (Prerequisites: None).

**BIOL 1300 Biological Applications of GIS Technology**

3 credits: 2 hours lecture/week – 2 hours lab/week - [Common Course Outline](#)

This course will teach the use and application of Geographic Information Systems (GIS), computerized systems designed for the storage, retrieval, and analysis of geographically referenced data through a combination of class presentations and laboratory exercises. Applications of GIS technology will include using analytical tools to explore at a scientific level the spatial relationships, patterns, and processes of organisms in relation to environmental, biological, demographic, geographic, and physical phenomena. The course revolves around analytical problem-solving and will be computer-intensive and project-based. (Prerequisites: None).

**BIOL 1310 Environmental Science Seminar**

2 credits: 2 hours lab/week - [Common Course Outline](#)

This course will introduce students to important research papers in the field of environmental science and ecology. The course will also provide an understanding of and exposure to environmental science fields, networking, career exploration, and internship opportunities, as well as aid in students' ability to apply scientific principles to various environmental science issues. These experiences are aimed to help prepare students for a future in-field experience, job, and/or further education. (Prerequisites: None).

**BIOL 2000 Ecology (MnTC 03, 10)**

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course teaches the basic principles of organismal, population, community, and ecosystem ecology, with an emphasis on applied ecology. The course is designed so that at the conclusion of the course students will have an appreciation and understanding of the principles of ecology and be able to: (1) explain the various biotic and abiotic forces acting on an organism in its natural environment, (2) determine the importance of these forces under varying conditions, and (3) predict how human activities may alter the effects of these forces. The lab portion of this course reemphasizes lecture concepts and offers hands-on experience with the concepts in the lab and/or field setting. (Prerequisites: BIOL 1100 or BIOL 1101 or BIOL 1102 or BIOL 1220).

### BIOL 2020 Introduction to Molecular Biology Methods

4 credits: 2 hours lecture/week - 4 hours lab/week - [Common Course Outline](#)

This is a semester-long, lab-intensive course for students currently employed in or ultimately seeking employment in a clinical or research laboratory with a health care focus. This course is specifically designed for students in Biotechnology programs at RCTC. The goal of this course is to provide the student with both a conceptual and practical understanding of basic lab techniques with particular emphasis on developing the skills to perform these specific techniques independently upon completion of the course. (Prerequisites: Grade of "C" or better in CHEM 1127 and BIOL 1220. Other Requirements: College level reading and writing).

### BIOL 2021 General Microbiology (MnTC 03)

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This is an introductory microbiology course covering the following topics: prokaryotic cell structure, metabolism, growth, genetics, pathogenesis; viruses; the eukaryotic microbes, fungi and protozoa; epidemiology, control of microbial growth, specific and nonspecific immunity and immune disorders. Students must show completion of prerequisite courses with a C or better. (Prerequisites: BIOL 1217 or BIOL 1220 and CHEM 1117 or CHEM 1127).

### BIOL 2200 General Zoology (MnTC 03)

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a survey course of the classification, evolution, ecology, anatomy and physiology of animals. The lab portion of this course reemphasizes lecture concepts and offers hands-on experience with representative members of organisms studied in lecture. (Prerequisites: BIOL 1220 or BIOL 1230).

### BIOL 2300 Genetics (MnTC 03)

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course presents the fundamental concepts of classical transmission genetics and modern molecular genetics. Topics include Mendelian genetics, linkage and mapping, chromosomal anomalies, population and evolutionary genetics, biotechnology and nucleic acid analysis. (Prerequisites: BIOL 1220 and either CHEM 1127 or PHYS 1117).

### BIOL 2920 General Biology I: Honors (MnTC 03, 10)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is one of two introductory courses in biology, offered as an honors course with more development and detailed cellular-based approach to the foundational principles of biology, and it addresses basic life processes at molecular, cellular, tissue, and organismal levels, principles of evolution, and interactions among organisms. One of Phi Theta Kappa's Honors Study Topic themes will unite topics covered in a traditional general biology course such as science and experimentation, cellular structure and function, genetics and inheritance, evolution, and ecology. Through an examination of primary scientific literature and the completion of a multifaceted, original research project, emphasis will be placed on the critical analysis and integration of biological concepts as they connect to the selected theme. This course is the Honors Equivalent of BIOL 1220. (Prerequisites: None).

## BUSINESS

### BUS 1101 Introduction to Business

1 credits: 3 hours lecture/week - [Common Course Outline](#)

This is a survey course in the field of business that will cover the major functional areas of business; including management, marketing, finance, and their more specialized sub functions. In addition, we will cover the foundations of American business, including the nature of the free enterprise system, business's social responsibilities, and the structure of American business. Attention will also be given to the international dimensions of modern business. (Prerequisites: None) (Other requirements: College level reading is recommended for this course.)

### BUS 1144 Entrepreneurship

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to take the student through the development and management of a small business. Students will learn to identify market opportunities both new and within existing markets through market analysis techniques developed through the course content. Students will become familiar with different organizational types, both from structure, taxation, asset protection as it relates to business ownership. The course will also prepare students in how to develop, organize and prepare a formal business plan. (Prerequisites: None) (Other requirements: College level reading and MATH 0098 are recommended for this course.)



### BUS 1307 Legal Issues for Supervisors

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course teaches students to examine workplace issues impacting supervisory responsibilities such as employee hiring decisions, discrimination, unemployment compensation, workers' compensation, Fair Labor Standards Act, employee health and safety, unions, workplace harassment, documentation, and termination. In addition, students will explore the business case for creating a safe and inclusive work environment including the implementation of programs that promote safety, diversity, and discourage harassment and discrimination. (Prerequisites: None).

### BUS 2101 Personal Finance

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers fundamental concepts of personal financial management, focusing on the major personal financial planning situations that individuals and families encounter. Money management topics include: budgets, banking, tax strategies, investments, credit, insurance, real estate, interest, pension investments, and retirement planning. (Prerequisites: MATH 0094 or MATH 0098) (Other requirements: College level reading is recommended for this course.)

### BUS 2143 Social Media Management Strategies

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course develops the management strategies needed to effectively oversee social media activities within a global business context. It addresses the manager's strategy of operation as it relates to various online systems, content creation, paid amplification, interpretation of engagement metrics/sentiment analysis and return on investment analysis in development of organizational social media plans. (Prerequisites: None. Other Requirements: None).

### BUS 2144 E-Business Management

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides an understanding of e-business management. It enables students to understand how a business manages their website and ecommerce systems, the opportunities, limitations, issues, and risks within the digital ecosystem. Through readings, class discussions, and interactive exercises, learners gain an understanding of how to create a global market and drive business through the Internet. Learners are introduced to the following topics: creating an online business model, identifying market opportunities, assessing infrastructure requirements, and understanding key opportunities and challenges in conducting an online business. Learners apply what they have learned through development of an e-business plan. (Prerequisites: None. Other Requirements: None).

### BUS 2150 Global Business

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This is an introductory course in which the major areas of international business is covered, including the need for professional business practices, cultural behavior, social responsibility of international trade, and the importance of understanding varying economic, social, political, cultural, and legal frameworks. In addition, the course will address international trade and investment, the global monetary systems, and how and why the world's countries differ. (Prerequisites: None) (Other requirements: BUS 1101 is recommended for this course.)

### BUS 2201 Principles of Marketing

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides the student with an introduction to marketing analysis, planning, decision-making and program implementation. Students gain an understanding of the principles of marketing and their interrelationship through a development of a formal market plan. College level reading is recommended for this course. (Prerequisites: None).

### BUS 2202 Consumer Promotions and Digital Marketing

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a study of the principles and practices of consumer promotions and digital marketing for a business organization. Students will study the components and interrelationships of the promotional mix: personal selling, sales promotion, advertising, public relations and direct marketing within the context of the digital ecosystem. Topics include understanding the process and benefits of implementing an integrated marketing communication (IMC) strategy, analyzing the functional areas of the promotional mix, identifying how brand relationships are created and maintained, determining what impacts consumers and business buying decisions, and building relationships through data management. Throughout the course, students will be prepared to take the Google AdWords Certification exam to equip them to navigate a significant portion of the digital ecosystem. Students will be exposed to the use of Artificial intelligence and its application to the marketing discipline. (Prerequisites: None. Other Requirements: None).

### BUS 2210 Legal Environment of Business

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This is a survey course which will provide the student with an in-depth understanding of the American legal system and its processes and an enhanced understanding of its effect on the modern global business environment. Topics include an introduction to American and international law and their legal systems, ethics, litigation, and alternative dispute resolution, administrative law, constitutional law, criminal law, torts, contracts, employment/labor law, consumer protection, intellectual property and real estate law. (Prerequisites: None) (Other requirements: College level reading and writing skills are recommended for this course.)

#### BUS 2212 Business and Economic Statistics

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is an introduction and overview of business statistics. Topics will include descriptive statistics, probability, sampling methods, confidence intervals, one and two sample tests of hypothesis, analysis of variance, and linear regression. Statistical calculators and software will be used extensively throughout the class. Emphasis is on application of statistical techniques and procedures for solving business related problems, rather than mathematical theories. (Prerequisites: MATH 0094 or MATH 0098).

#### BUS 2232 Principles of Management

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides an analysis of the functions performed by managers of all types of organizations. Current applications in: strategic planning and control, managing workplace dynamics, managerial ethics and corporate social responsibility, leadership, teamwork in organizations, and developing effective communications will be emphasized. College level reading required. (Prerequisites: None) (Other requirements: College level reading is recommended.)

#### BUS 2235 Organizational Dynamics

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on the behavior of individuals and teams within diverse organizations and organizational structures and processes. Models and tools for diagnosing organizational culture and values, communications in the workplace, inter-group conflicts and negotiations, motivational applications, team dynamics, stereotyping and facilitating organization change are analyzed. (Prerequisites: None) (Other requirements: College level reading is recommended.)

#### BUS 2240 Project Management

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course examines the processes, tools and techniques along with the best practices within the project management disciplines. Projects drive change in organizations. A project is aimed at moving an organization from one state to another state in order to achieve a specific objective. Students will discover how projects are methodically organized, appropriate tools to utilize, and how to plan and schedule projects to achieve their objectives. From risk assessments to ethical decision making, students will walk through the entire project management plan throughout the semester. (Prerequisites: None) (Other requirements: College level reading is recommended.)

**BUS 2290 Business Topics**

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course is designed to help familiarize the student with the current practices and trends in business and marketing through a series of discussions and applications of emerging trends in business. (Prerequisite: None)

**BUS 2296 Business Internship**

Credits and hours/week may vary. - [Common Course Outline](#)

This course provides work experience designed to help business students apply classroom information on the job. Students gain valuable industry skills training and networking opportunities for employment. (Prerequisites: None) (Other requirements: Completion of one semester of Business, Accounting, or Economics courses is recommended.)

**BUS 2507 Operations and Guest Service Management**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides the learner with a working knowledge of the functions and role of General Managers (GM), Assistant General Managers (AGM), and other management positions in the hospitality industry. The major content area covers the responsibilities of management, as well as the strategies and techniques that contribute to successful operations. (Prerequisites: None).

**BUS 2508 Sales Management and Analytics**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides the learner with a working knowledge of sales and digital marketing. Throughout the class, an overview of the sales professionals' key roles, responsibilities, and strategies for success within several industries will be provided. The course will educate the student regarding methodologies for data analysis and persuasive communication. The learner will be introduced to the revenue budgeting process as well as forecasting based upon customer segmentation. Throughout the course, learners will be presented with tools, methods, and strategies that allow sales professionals to influence potential customers. From the initial dream phase, through the research and purchase decision of the customer, students will be exposed to the various digital touchpoints that consumers review prior to making the purchase. Throughout the class, the student will receive instructions preparing them for the Goggle Analytics Certification. (Prerequisites: None).

## BUS 2509 Hospitality Revenue Generation Strategies

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides the learner with a working knowledge of the functions and roles of revenue and e-commerce managers in the hospitality industry. The student will be introduced to revenue management as a systematic process designed to increase revenue by leveraging techniques and practices that influence a consumer's decision to make a purchase. In addition to evaluating different pricing models and major digital channels, this course provides a foundation for more advanced revenue management courses in forecasting, group management, pricing strategy, and application of revenue management techniques to other hospitality-related industries. Learners will be provided with proven methods and strategies to enhance visibility and increase conversion to achieve business objectives. All of the techniques and practices discussed in this course are applicable to a variety of service management roles. (Prerequisites: None).

## COMPUTER AIDED DRAFTING

### CAD 1039 SolidWorks

4 credits: 1 hour lecture/week – 6 hours lab/week - [Common Course Outline](#)

This course offers students the understanding of 3D parametric solid modeling using SolidWorks. It also addresses the concepts of parametric design, design intent, and the necessary commands to carry out these functions. Items covered will be construction of 3D solid modeling parts, assemblies, and creating 2D automated drawings. Learning by example: students will design real world products with SolidWorks. This course will be taught using the latest release of SolidWorks. Students must receive a grade of C or better in all CAD courses. (Prerequisites: None. Other requirements: RCTC CAD Major).

### CAD 1040 Technical Illustration for Industry

2 credits: 1 hours lecture/week – 2 hours lab/week - [Common Course Outline](#)

Students attending this course should have experience using SolidWorks. Students will create and generate pictorial drawings, photorealistic renderings, motion analysis of 3D models, animations, and e-drawings using various SolidWorks add-on products such as: Composer, PhotoView 360, and Motion Manager. Students will create manuals and instructions for consumer and industry products. Each student will create an electronic portfolio of their projects for use in interviews. This course will be taught using the latest release of SolidWorks. Students must receive a grade of C or better in all CAD courses. (Prerequisites: CAD 1039).

### CAD 1120 Sheetmetal and Weldments

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is designed to teach welding symbols and their applications as well as sheet metal design. SolidWorks skills are incorporated into making complete weldment drawings and sheet metal formed and flat layouts. Students will create and identify welding symbols and learn to apply them in SolidWorks drawings. Students will also calculate sheet metal bend allowance and apply those dimensions to flat layouts using SolidWorks. This course will be taught using the latest release of SolidWorks. Students must receive a grade of C or better in all CAD courses. (Prerequisites: CAD 1039).

### CAD 1123 Technical Illustration

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course will cover the techniques used for generating pictorial drawings using CAD. The student will become familiar with a variety of applications in which pictorial drawings produced within a CAD program are used to illustrate technical information outside of CAD. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all pre-requisite courses. (Prerequisites: CAD 1039, CAD 1120, CAD 1220 and CAD 1221).

### CAD 1145 Manufacturing Materials and Processes I

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course will give the student a firm foundation in shop safety, blue print reading, the use and care of measuring instruments and various other hand tools used in the machining field. The student will also learn about the operation of vertical milling machines, engine lathes, cut-off saws, and other machine shop equipment. They will also be introduced to product assembly and fastening technology fundamentals. This will be taught with emphasis placed on the gaining hands on experience. (Prerequisites: None).

### CAD 1147 Manufacturing Materials and Processes II

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is designed to provide detailed knowledge of materials and processes used in the manufacturing of products, machines, and structures. The course is designed in a lecture/lab format divided into units including casting and molding, forming, separating, conditioning and assembly techniques. Tours of the machining/drafting industry will be an integral part of this class. Upon completion of this course, students should have a working knowledge of common materials and manufacturing activities used to create products from designs. This knowledge will further enhance the student's ability to design products for manufacturing. Students must receive a grade of C or better in all prerequisite courses. (Prerequisites: CAD 1039, CAD 1120, CAD 1220, CAD 1221).

#### CAD 1149 Manufacturing Processes and Practices

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is designed to provide general knowledge of materials and processes used in manufacturing. This includes mold design, mechanisms, fixtures, sheet metal processes, machining processes and prototyping. This knowledge will enhance a students' ability to design manufacturable products and processes using different CAD software. Students will have the opportunity to tour manufacturing facilities to understand the various manufacturing processes. (Prerequisites: None) (Other Requirements: Students must receive a grade of C or better in all CAD courses.)

#### CAD 1150 CAD Data Communication

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

The course offers students the capability of integrating CAD data with MS Office products and graphics programs to create projects in a hands-on environment. Students will create projects using the CAD prototype shop - learning to operate the laser, rapid prototype machine, CNC router and Acrylic bender. These skills will make CAD majors more productive in the workplace. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all prerequisite courses. (Prerequisites: CAD 1039, CAD 1120, CAD 1220, CAD 1221).

#### CAD 1220 Engineering Drafting

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is a basic class in engineering drafting which is designed to provide working knowledge of the industry's graphic language and detailed drawing using SolidWorks. Geometric construction, projections drawing theory, the multi-view system, auxiliary and section views, and projections will be covered. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. (Prerequisites: None).

#### CAD 1221 Technical Drafting

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course introduces several topics in technical drafting including the use of freehand and electronic sketches along with the creation of detailed drawings in CADs. Projection drawing theory, the multi-view system, auxiliary views, and drawing revision processes will be covered. The concept of reverse engineering is explored and involves learning the proper use of a caliper. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. (Prerequisites: None).

#### CAD 1222 Dimensioning and Tolerancing

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course provides an introduction to the fundamentals of geometric dimensioning and tolerancing of engineering drawings. The student will become familiar with basic dimensioning standards and conventions and learn to apply them to drawings. The proper use of a variety of tolerancing techniques will be practiced including both conventional and geometric tolerancing. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all prerequisite courses. (Prerequisites: CAD 1039, CAD 1120, CAD 1220, CAD 1221).

#### CAD 1225 Dimensioning and Tolerancing

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course provides the fundamentals of geometric dimensioning and tolerancing of engineering drawings. The student will become familiar with dimensioning standards and conventions along with dimensioning variants and learn to apply them to drawings. The proper use of a variety of tolerancing techniques will be practiced including both conventional and geometric tolerancing. This course will be taught using the latest release of SolidWorks. Students must receive a grade of C or better in all CAD courses. (Prerequisites: CAD 1039. Other Requirements: None).

#### CAD 1226 Drafting Practices for Industry

4 credits: 1 hour lecture/week - 6 hours lab/week - [Common Course Outline](#)

This course is the foundation for engineering and technical drafting basics which is designed to provide working knowledge of the industry's graphic language and detailed drawings using SolidWorks. Topics that will be introduced are geometric construction by freehand and electronic sketching, projection drawing theory, the multiview system, auxiliary and section views, and projections will be covered. Students will use SolidWorks to create parts, prints and revisions. Students will reverse engineer parts which includes learning the proper use of calipers and documentation for reverse engineering projects. This course will be taught using the latest release of SolidWorks. Students must receive a grade of C or better in all CAD courses. (Prerequisites: CAD 1039. Other Requirements: None).

#### CAD 1323 Basic Dimensioning

2 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is designed to teach basic machine dimensioning using various drafting standards. Students will be introduced to dimensioning multi-view drawings and assemblies using several different dimensioning methods including ordinate, baseline, continuous, and dual dimensioning. Students will also learn how to implement drawing revisions and be introduced to the concept of flat pattern design. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all prerequisite courses. (Prerequisites: CAD 1039, CAD 1120, CAD 1220, CAD 1221).



### CAD 2258 Product and Machine Design

4 credits: 1 hour lecture/week - 6 hours lab/week - [Common Course Outline](#)

This course covers machine design components such as gears, keys, keyways, and shafts, belts and pulleys, and linkages. Students will work in small groups similar to industrial practices. They will have the opportunity to model physical prototypes. A second component of this class will be learning the product design process and following it through by making a complete prototype project. Students will design projects beginning with ideas then producing layouts, detailed parts, and assembly drawings. Students will use these designs to create working prototypes by 3D printing or laser cutting. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. (Prerequisites: CAD 1039) (Other Requirements: Students must receive a grade of C or better in all CAD classes.)

### CAD 2323 Advanced Dimensioning

4 credits: 1 hour lecture/week - 6 hours lab/week - [Common Course Outline](#)

The course is designed to follow different drafting standards such as ANSI, 150, MIL or our own school standards. Tolerancing methods and dual dimensioning will be covered as well as geometric tolerancing symbols and standards. Attention is given to fits and detailing practices, and the assembly of parts. This course will be taught using the latest release of SolidWorks. Students must receive a grade of C or better in all CAD courses. (Prerequisites: CAD 1039. Other Requirements: None).

### CAD 2324 Special Projects I

2 credits: 4 hours lab/week - [Common Course Outline](#)

In this course students will select an area of interest and specialize in advance drafting work to reinforce skills and knowledge gained during the first year or a new area that was not covered in the regular program course offerings. Projects will be selected with approval of instructor. A contract will be written on required work. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all prerequisite courses. (Prerequisites: CAD 1123, CAD 1147, CAD 1150, CAD 1222, CAD 1323).

### CAD 2335 Working Drawing and Design

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course combined all facets of the first year classes into individual and team projects. More attention is given to geometric tolerancing, fits and detailing practices, and the assembly of parts. This course will be in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all pre-requisite courses. (Prerequisites: CAD 2323, CAD 2324, CAD 2358, CAD 2460).

### CAD 2358 Machine Design

5 credits: 2 hours lecture/week - 6 hours lab/week - [Common Course Outline](#)

This course covers mechanisms used to transmit rotary motion and power. Content will include design information about gears, belts, pulleys, and chain drives. Students will design power transmission projects beginning with ideas then producing layout, detail, and assembly drawings. Students will work in small groups similar to industrial practices. They will learn to use vendor's information from the internet, assign part numbers, and generate bills of materials. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all prerequisite courses. (Prerequisites: CAD 1123, CAD 1147, CAD 1150, CAD 1222, CAD 1323).

### CAD 2400 Reverse Engineering and Rapid Prototyping

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course will teach students how to gather data, disassemble, measure and model parts using SolidWorks. Students will reverse engineer parts using measuring tools. This course will be taught using the latest release of SolidWorks. (Prerequisites: CAD 1039) (Other Requirements: Students must receive a grade of C or better in all CAD courses.)

### CAD 2424 Special Projects II

2 credits: 2 hours lab/week - [Common Course Outline](#)

In this course students will work on advanced design projects to reinforce skills and knowledge gained during the coursework, or a new area that was not covered in the regular program course offerings. Projects will be assigned or selected with approval of instructor. A contract will be written on required work. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all prerequisite courses. (Prerequisites: CAD 2323, CAD 2324, CAD 2358, CAD 2460).

### CAD 2430 Special Fields in Drafting

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#) This course offers CAD students the opportunity to study special fields of drafting. Students will create hands on projects such as signage, props, vehicle wraps among other creative designs. Students will use CAD to design the projects. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all prerequisite courses. (Prerequisites: CAD 1039, CAD 1150 or instructor's permission).

#### CAD 2440 CAD Portfolio

1 credits: 1 hour lecture/week - [Common Course Outline](#) Students attending this course should have experience using SolidWorks. Students will create photorealistic renderings, motion analysis of 3D models, animations, and e- drawings. Each student will create an electronic portfolio of their projects for use in interviews. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all prerequisite courses. (Prerequisites: CAD 2323, CAD 2324, CAD 2358, CAD 2460).

#### CAD 2458 Product Design

5 credits: 2 hours lecture/week - 6 hours lab/week - [Common Course Outline](#) Students will learn design concepts, how to design parts, and investigate alternative design solutions. Students will then prepare a complete graphic display of solutions including an assembly drawing, details, manufacturing processes required and tooling specifications. Students will learn to calculate sheet metal bend allowance and apply those dimensions to flat layouts. Plastic mold processes will be explored. Each student will design an injection mold cavity. The class will provide a typical mechanical design experience as a member of an industrial design team. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all prerequisite courses. (Prerequisites: CAD 2323, CAD 2324, CAD 2358, CAD 2460).

#### CAD 2460 Surfacing and Advanced Modeling

2 credits: 1 hour lecture/week -2 hours lab/week - [Common Course Outline](#) This course offers students the understanding of surface modeling using SolidWorks by designing real world products. It also addresses the concepts of advanced parametric modeling and design. This course will be taught using the latest release of SolidWorks. Students must receive a grade of C or better in all CAD courses. (Prerequisites: CAD 1039).

#### CAD 2500 CAD Software and Standards - [Common Course Outline](#)

2 credits: 1 hour lecture/week - 2 hours lab/week - Students will be able to create CAD projects using AutoDesk products such as AutoCAD and Revit along with other "freeware" parametric CAD software. Students will learn the basics of these CAD software packages to become familiar with them for working in various industries. Students will learn and apply different industry drafting standards, revisions, and Engineering Change Orders (ECO's). Students must receive a grade of C or better in all CAD courses. (Prerequisites: CAD 1039).

## CHEMISTRY

### CHEM 1031 Introduction to Forensic Chemistry (MnTC 03)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

Forensic science is the application of scientific knowledge in the criminal justice system. A forensic chemist uses the principles and techniques of chemistry to analyze physical evidence within the crime lab. This introductory lecture/laboratory course for non-science majors teaches the elementary concepts of chemistry through the lens of forensic chemistry. (Prerequisites: None).

### CHEM 1100 Chemistry and Our World (MnTC 03, 10)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course investigates the world of chemistry, the nature of matter and our everyday interactions with chemicals. Elementary concepts of chemistry will be introduced as they relate to economic, political, environmental, and social issues. Through this unique approach to studying chemistry, students will use critical-thinking skills to assess the impact of chemicals in the modern world. (Prerequisites: None).

### CHEM 1101 Elements of Chemistry (MnTC 03)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course investigates the world of chemistry, the nature of matter and our everyday interactions with chemicals. Elementary concepts of chemistry will be introduced as they relate to economic, political, environmental, and social issues. Through this unique approach to studying chemistry, students will use critical-thinking skills to assess the impact of chemicals in the modern world. (Prerequisites: None. Other Requirements: College level reading.)

### CHEM 1117 General, Organic and Biological Chemistry I (MnTC 03)

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is the first of two courses that provide a broad introduction to the principles of general, organic, and biological chemistry. This course includes a discussion of general chemistry principles related to measurements, matter and energy, atomic theory, bonding, and reactivity. An introduction to organic chemistry functional groups and isomerization is included. Chemistry knowledge is vital for general education students to make informed decisions on political, social, ethical, health, and environmental issues. (Prerequisites: CHEM 1101 or instructor permission).

#### CHEM 1118 General, Organic and Biological Chemistry II

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a survey of organic and biological chemistry. After a brief review of general chemistry concepts, organic chemistry topics related to biological systems will be discussed. The structure and reactivity of carbohydrates, lipids, proteins, and nucleic acids will be described along with the cellular metabolism of these compounds. (Prerequisites: CHEM 1117 or CHEM 1128).

#### CHEM 1127 Chemical Principles I (MnTC 03)

4 credits: 3 hours lecture/week - 3 hours lab/week - [Common Course Outline](#)

This first semester General Chemistry course is an of an in-depth study of terminology and chemical principles pertaining to the areas of measurements, atomic theory, nomenclature, reactions, chemical calculations, solids/liquids/gases, thermochemistry, quantum theory, periodicity, bonding, and molecular geometry. Note: It is highly recommended that students have completed a previous chemistry course (high school or college) prior to registering for this course. This course will build upon the topics in the previous chemistry course. (Prerequisites: MATH 0099. Other Requirements: College Reading Level).

#### CHEM 1128 Chemical Principles II

4 credits: 3 hours lecture/week - 3 hours lab/week - [Common Course Outline](#)

This second semester General Chemistry course is an in-depth study of terminology and chemical principles pertaining to the areas of basic organic chemistry, solutions, reaction kinetics, equilibria, acid-base chemistry, solubility products, thermodynamics, electrochemistry, and nuclear chemistry. (Prerequisites: CHEM 1127).

#### CHEM 2100 Survey of Organic Chemistry

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is a survey of organic compounds. Students are presented an overview of structures, bonding, nomenclature, and reactivity of the major functional groups. The study of reactions will be focused on the mechanisms to explain concepts such as selectivity. (Prerequisites: CHEM 1117 or CHEM 1128).

#### CHEM 2127 Organic Chemistry I

4 credits: 3 hours lecture/week - 3 hours lab/week - [Common Course Outline](#)

This course is a thorough study of the chemistry of organic compounds with emphasis on structure, properties, and reactivity. Molecular structure along with isomerization and conformational analysis leads to a deep understanding of physical and chemical properties. The study of reactions will be focused on the mechanisms to explain concepts such as regio- and stereoselectivity. (Prerequisites: CHEM 1128, can be concurrent with instructor permission).

### CHEM 2128 Organic Chemistry II

4 credits: 3 hours lecture/week - 3 hours lab/week - [Common Course Outline](#)

This course is a continued study of the chemistry of organic compounds with emphasis on structure, properties, and reactivity. Chemical structures will be determined via multiple spectroscopic methods. The study of reactions will be focused on the mechanisms to explain concepts such as regio- and stereoselectivity. Development and understanding of multistep synthesis will be a focus of this course. (Prerequisites: CHEM 2127).

### CHEM 2292 General Chemistry Lab

Credits and hours/week may vary. - [Common Course Outline](#)

USE FOR ORGANIC CHEMISTRY I LECTURE ONLY - This course is a thorough overview of atoms, molecules, structures, and bonding in organic chemistry. Reactions of organic compounds as acids and bases as well as nucleophiles and electrophiles are covered. Stereoisomerism and simple synthesis of organic compounds are presented. Functional groups and biomolecules of interest are introduced and their reactivity studied. Nucleophilic substitution and elimination reactions complete the course. This is a variable credit course. (Prerequisites: CHEM 1128 or Co-Requisite: CHEM 1128 with instructor permission).

### CHEM 2297 Chemistry Research

1 credits: 3 hours lab/week - [Common Course Outline](#)

This course is designed to give students a hands-on introduction to Chemistry research. Students will conduct independent research under the close supervision of a faculty advisor. The type of research will be determined by the faculty advisor and student. This course can be repeated up to four times with the project changing or expanding in complexity each semester. With instructor's permission, this course can be taken concurrently with CHEM 1127. (Prerequisite: CHEM 1127) (Other Requirements: This course can be taken concurrently with CHEM 1127.)

### CHEM 2800 Biochemistry

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces the fundamental principles in biochemistry. Topics cover the structure and function of biomolecules, kinetics of enzyme-catalyzed reactions, major metabolic pathways that synthesize and degrade biomolecules, and the storage and transmission of genetic information in organisms. (Prerequisites: CHEM 2100 or CHEM 2127).

## COMMUNITY HEALTH WORKER

### CHW 1000 Community Health Worker: Role, Advocacy, Outreach and Resources

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course defines the role of the Community Health Worker (CHW). Students will explain strategies for personal safety in relations to home visits. Students will also gain an understanding of value of self-care, and personal wellness. Students will also become familiar with the health-related needs of their communities and cultural considerations.

Students will learn about their role as a liaison, connecting clients and appropriate community resources. (Prerequisites: None).

### CHW 1100 Health Communication, Teaching and Capacity Building

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will introduce concepts of verbal and non-verbal communication required for the Community Health Worker (CHW) to interact effectively with clients, their families, agencies and healthcare providers of various backgrounds. Students apply skills such as active listening and motivational interviewing. This course also focuses on the CHW's role as a teacher to increase the capability of the community and the client to access the health care and social services systems. Course materials will emphasize empowering clients to become self-sufficient in achieving personal health goals within the role of the CHW. (Prerequisites: None).

### CHW 1200 Documentation, Legal and Ethical Issues in Community Health Work

3 credits: 1 hour lecture/week - [Common Course Outline](#)

This course focuses on the legal and ethical dimensions of the Community Health Worker's (CHW) role. Included are boundaries of the CHW position, agency policies, confidentiality, liability, mandatory reporting, and cultural issues that can influence legal and ethical responsibilities. This course also focuses on the importance and ability of the CHW to gather, document and report client visits and other activities. The emphasis is on appropriate, accurate and clear documentation considering legal and agency requirements. (Prerequisites: None).

### CHW 1300 Health Promotion Competencies

5 credits: 5 hours lecture/week - [Common Course Outline](#)

This course focuses on the role of the Community Health Worker (CHW) in health promotion and disease prevention and management. Topics covered include cultural navigation, social determinants of health, connections to resources and supporting clients and families. (Prerequisites: CHW 1000, CHW 1100, CHW 1200).

### CHW 1400 CHW Internship

2 credits: 6 hours lab/week - [Common Course Outline](#)

This course focuses on the application of the Community Health Worker's knowledge of the community and the ability to prioritize work. Emphasis is on the use and critical analysis of resources and on problem solving. The student is expected to complete a total of 96 hours of supervised practical experience that allows opportunities for the student to prepare for independent work in the Community Health Worker (CHW) role. (Prerequisites: CHW 1000, CHW 1100, CHW 1200).

## COMMUNICATION STUDIES

### COMM 1000 Introduction to Workplace Communication

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This introductory course is skill based and designed to provide basic communication strategies to build positive relationships in career settings. It focuses on developing skill sets in active listening, conflict management, nonverbal awareness, and non-defensiveness. The goal is to create confidence and competence in various communication contexts, such as customer service, work teams, and personal relationships. Attention is placed on interpersonal communication, team/small group communication and public speaking. (Prerequisites: None).

### COMM 1106 Cinema as Communication (MnTC 06, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course surveys Hollywood filmmaking as an art form, economic force, and as a system of cultural communication. Stylistic elements are examined from the perspective of various genres and time periods. Students will learn the language of cinema; increase their understanding of how films work as art and how films communicate meaning as cultural artifacts. Students will also learn analysis skills to become more active and critical viewers. (Prerequisites: None).

### COMM 1110 Introduction to Mass Communication (MnTC 05, 09)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will cover the nature, function and social responsibilities of mass media. Areas covered include media literacy, propaganda, newspapers, magazines, radio, music recording, book publishing, advertising, films, public relations, freedom of speech/press, politics, and media ethics. Pro- and anti-social effects of media consumption will also be examined. (Prerequisites: None).



**COMM 1114 Fundamentals of Public Speaking (MnTC 01)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on the theory and practice of oral communication skills which affect critical thinking in public speaking situations. An emphasis is placed upon research, organization, and delivery. Students will present speeches in face-to-face settings for diverse audiences and settings. Course topics may include clearly organizing a speech in compliance with the speech's objective; understanding various organizational patterns; listening in diverse settings; executing competent vocal and physical delivery skills; adapting to diverse settings; reducing communication apprehension; and effectively using visual aids. College level reading and writing skills are required. (Prerequisites: None).

**COMM 1125 Oral Interpretation of Literature (MnTC 06, 09)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is highly experiential and introduces and applies the skills of literary analysis for the purpose of oral interpretive performance. Students will be challenged to examine the use of personal voice in literature as a crucial tool in understanding how we, as humans, communicate via the written word and the embodied performance of that word in a democratic society. Students will be challenged to deepen their understanding and practical knowledge as to how various issues of justice, including economic, social, political, environmental and/or equity are expressed in literary works. Students will engage in oral performance literature, including original works, thereby demonstrating how their own and others' voices reflect positions in society, effect change and provide opportunities for free exchange of democratic ideas. (Prerequisites: None).

**COMM 1130 Interpersonal Communication (MnTC 01, 07)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course develops students' interpersonal communication skills necessary for living and working effectively with other individuals in a society with great population diversity. Topics may include communication theory, verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, developing and maintaining personal and professional relationships. (Prerequisites: College level reading and writing skills: appropriate score on the RCTC placement test or completion of appropriate developmental courses with grades of C or better).

**COMM 1337 Social Media (MnTC 05)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed for those seeking to become mass communication specialists in using social media in and for the organization including the integration of social media into marketing strategies, and professionals who need to leverage social media for career success. The course will also cover the personal use of social media. The course utilizes projects that give students hands on experience implementing social media strategies. (Prerequisites: None).

**COMM 2100 Intercultural Communication (MnTC 01, 08)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course develops the intercultural communication skills necessary for students living and working with individuals of different cultures. Students will gain intercultural self-awareness and improve communication competency. Students will examine social, economic, and political viewpoints from a cross-cultural perspective. Topics may include: defining culture, differences and similarities in using verbal and nonverbal symbols among different cultures, barriers to effective intercultural communication, interactive listening, working in intercultural groups, adapting messages for culturally diverse groups, and strategies for examining equity and inclusion. (Prerequisites: College level reading and writing skills; appropriate score on the RCTC placement test or completion of appropriate development courses with grades of C or better).

**COMM 2130 Team/Small Group Communication (MnTC 01)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

The purpose of Team/Small Group Communication is to enhance students' understanding of the theories and practice of small group communication so that they may communicate competently in various team contexts. Students will gain knowledge about small group process theory, along with actual experiences participating in teams. The course will enhance students' ability to engage in effective communication in diverse team and group contexts including taking leadership roles and conducting meetings. This course examines basic communication concepts and processes which influence the nature and function of group dynamics in both face-to-face and computer-mediated teams. (Prerequisites: College level reading and writing skills; appropriate score on the RCTC placement test or completion of appropriate developmental courses with grades of C or better).

**COMM 2214 Professional Communication (MnTC 01)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course allows students to develop a variety of communication skills and an understanding of related communication principles in a professional setting. Coursework prepares students to interview for and work in diverse organizational contexts. College level reading and writing skills; appropriate score on the RCTC placement test or completion of appropriate development courses with grades of C or better.

**COMM 2220 Communication and Gender (MnTC 01, 07)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

The course focuses on how communication and culture create, maintain, and change gender. Patterns in women's and men's verbal and nonverbal communication, why these patterns differ, and how communication differences are perceived will be emphasized. This course explores gendered communication in a variety of interpersonal and situational contexts, including the family, friendship, romantic relationships, education, the workplace, and the media. College level reading and writing skills; appropriate score on the RCTC placement test or completion of appropriate development courses with grades of C or better. (Prerequisites: None).

### COMM 2292 Communication Activity

Credits and hours/week may vary. - [Common Course Outline](#)

This course allows students to complete an individualized project that blends communication theory and practical application. All projects will explore a topic of communication that the student can study and analyze as a participant observer. Examples of project areas may include: career communication; mass communication; and/or service learning. An individual project should be student generated, structured, and presented to the instructor prior to registering for the class. This is a variable credit course. (Prerequisites: None).

### COMM 2299 Special Topics in Communication Studies

Credits and hours/week may vary. - [Common Course Outline](#)

This course focuses on a specific topic chosen by the instructor who teaches the class. This course offers in-depth exploration of a special topic, issue, or trend in the communication field. Topics might include current events (such as a political campaigns class during an election year), professional communication (such as networking, cross-generational issues, mediated/online communication), health communication, and/or more in-depth analyses of industry trends. This is a Category 1 course which may be taken twice for credit. This course may be taken additional times by auditing. Because the course content varies, a student taking the same course number a second time cannot replace the first grade with the second. College level reading and writing required. This is a variable credit course. (Prerequisites: None).



## COMPUTER SCIENCE

### COMP 1010 Linux Operating Systems

3 credits: 3 hours lecture/week – [Common Course Outline](#)

This course introduces the free, open-source, Linux operating system using variants such as Ubuntu, Rocky, or Kali. You will learn how to install, setup, use, manage, and troubleshoot Linux installations. You will begin with learning command-line interface (shell) concepts and techniques, including basic commands, navigating the file system, I/O redirection, and how the shell processes commands. Other topics include installing and managing software packages, managing users and groups, creating and formatting file systems, and the basics of Linux text processing and regular expressions. (Other Requirements: Keyboarding skills, Windows experience is helpful but not required). (Prerequisites: None).

### COMP 1080 Networking Protocols and Analysis

4 credits: 4 hours lecture/week – [Common Course Outline](#)

This class examines the basic principles of networking, transitioning from protocols (TCP, UDP, ICMP, and IP), network architecture, and the OSI model into network defense. Networks are the lifeblood of an organization as packets transition from one device to another through internal and external communications. Cybersecurity professionals must have a strong understanding of network processes, protocols, and administration. This course will focus on developing skills in creating network architecture, network administration, network analysis, and how to apply this knowledge to improve the network security posture through defense in depth. (Prerequisites: MATH 0099, COMP 1150)

### COMP 1112 Introduction to Computers With Applications

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces the components of a personal computer, computer terminology, the internet, email, and the creation of documents, presentations, worksheets, and databases through hands-on experience with the Microsoft Windows operating system and the Microsoft Office Suite (Word, PowerPoint, Excel, Access, and Outlook). This course is designed as a general education course for all learners, regardless of their career choice. This course enhances the learner's knowledge and understanding of computers and their awareness of how computers impact their lives. REQUIREMENTS: Keyboarding skills, Windows experience is helpful but not required. (Prerequisites: None).

### COMP 1140 Introduction to Database and SQL

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces database design and implementation concepts. Students will learn how to design, build, and use databases utilizing a relational Database Management System (RDBMS) such as Microsoft SQL Server, MySQL, Oracle, or PostgreSQL. Topics include relational database design principles, Entity-Relation (ER) diagrams, and Structured Query Language (SQL). Students will use SQL to create, retrieve, update, and delete database tables and records. They will design and implement their own relational databases. (Prerequisites: MATH 0099. Other Requirements: College-level reading).

### COMP 1150 Computer Science Concepts

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This can serve as a first course for Computer Science majors or a stand-alone course for those interested in learning more about the field. It introduces fundamental computer science concepts, including machine architecture, data representation, operating systems, networking and telecommunications, algorithms, programming languages, software engineering, data organization, and artificial intelligence. Students will learn to implement simple programs using Python or other languages. (Prerequisites: MATH 0099. Other Requirements: College-level reading).

#### COMP 1337 Art and Code (MnTC 06)

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course introduces concepts in design and art by using open-source graphic software libraries meant to teach programming to visual artists and new computer programmers. This course explores the elements of art and principles of design by using the basic concepts of computer programming, such as variables, control structures, arrays, loops, functions, and objects. There will be an emphasis on procedural approaches that incorporate simple chance, randomness, or probability into designs. There will also be discussion of the current state of generative art and art historical precedents for working procedurally. This course is geared toward students with no programming experience. (Prerequisites: None)

#### COMP 1731 Programming for the Internet

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces developing web applications. Students will explore HTML and CSS, forms, error checking and validation, server-side scripting, and database interaction. Students will construct and evaluate multiple web applications. College level reading is required. (Prerequisites: MATH 0099).

#### COMP 1741 JavaScript

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces client-side scripting. Students will explore HTML and CSS, dynamic client-side scripting using JavaScript, client-side error checking and validation, and asynchronous server interaction. Students will construct and evaluate various client-side interactions. College level reading is required. (Prerequisites: MATH 0099).

#### COMP 1751 Mobile Application Development

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces development of applications for mobile devices. Students will explore web programming, native device programming, and database interaction. Students will construct and evaluate multiple applications for mobile devices. College level reading is required. (Prerequisites: MATH 0099).

#### COMP 2048 Introduction to Cybersecurity

4 credits: 4 hours lecture/week – [Common Course Outline](#)

This class holistically examines cybersecurity processes and procedures, including assessment of the security posture of an organization, monitoring and securing an environment, operating within laws and guidelines, including compliance, risk assessment, and security governance, and identifying, analyzing, and responding to incidents. Focus is applied to proper security architecture, identifying threats, implementing mitigations, and incident response while working within the confines of governmental and global regulations, together with compliance standards. This class aligns to the CompTia Security+ exam. (Prerequisites: MATH 0099, COMP 1080)

### COMP 2049 Cybersecurity Systems

4 credits: 4 hours lecture/week – [Common Course Outline](#)

This class examines the basic principles of cybersecurity systems and analysis, involving developing knowledge of current trends affecting security analysts within on-premise, cloud, and hybrid environments. Additionally, this class will develop knowledge related to proactive monitoring, threat detection, SIEM tooling, EDR, XDR, threat intelligence, and how to respond to threats. Students will leave equipped with with the practical skills needed for real-world applications and preparation for the CompTIA Cybersecurity Analyst (CySA+) exam.

(Prerequisites: MATH 0099, COMP 2048)

### COMP 2243 Programming and Problem Solving

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course introduces the major concepts of problem solving, algorithm design, and programming. Emphasis is on algorithm development, analysis, refinement, top-down and object-oriented program development concepts. Simple and composite data types, classes, and control structures are covered. Java programming language will be used. Students may take COMP 1150 and COMP 2243 concurrently. College level reading is required.

(Prerequisites: COMP 1150, MATH 1115).

### COMP 2247 Algorithms and Data Structures

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course introduces the major concepts of problem solving, algorithm design, and programming. Emphasis is on algorithm development, analysis, refinement, top-down and object-oriented program development concepts. Simple and composite data types, classes, and control structures are covered. Programming languages such as Java, Python, or C++ will be used. Students may take COMP 1150 and COMP 2243 concurrently. (Prerequisites: COMP 1150, MATH 1115. Prerequisites may be satisfied by equivalent Math and/or Reading Placement scores).

### COMP 2275 Computer Architecture

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course covers the principles of the hardware and computer systems. Topics include combinational and sequential logic circuit, data representation, computer organization and architecture, instruction execution cycle, processor, memory, machine instruction formats, assembly language, I/O and storage devices and mechanisms, concurrency techniques, comparison of different architecture categories, and emerging technologies. College level reading is required. (Prerequisites: COMP 1150, COMP 2243).

### COMP 2501 Information Technology Capstone

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is the culmination of the Information Technology degree. Students will demonstrate their capabilities in the form of a capstone project. The capstone project enables students to showcase the concepts learned throughout the degree program and apply what they have learned. This course is largely independent, with minimal guidance to allow students to develop their model and present the analysis and findings. (Prerequisites: COMP 2247, DSCI 2253).

### COMP 2502 Cybersecurity Internship

1-3 credits: up to 48 hours lecture/semester – [Common Course Outline](#)

This course allows students to apply classroom skills in a professional work setting. Experience will be gained in assisting and independently performing technical and organizational tasks in a Cybersecurity setting. (Other Requirements: This class should be taken in the final semester of the cybersecurity program. (Prerequisites: COMP 1010, COMP 2048, COMP 2243).



## CARPENTRY

### CR 1600 Carpentry Theory I

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on the properties of building materials, safe use of hand and power tools, and reading blueprints. Traditional and modern building systems will be analyzed and reviewed. (Prerequisites: None).

### CR 1610 Residential Blueprint Reading

2 credits: 2 hours lecture/week - [Common Course Outline](#)

The focus of this course is to develop the ability to read and interpret architectural drawings and specifications. Topics include symbols and abbreviations, floor plans, elevations, and section views. Students will discover where to find needed information and learn to visualize the draftsman's intent. (Prerequisites: None).

### CR 1612 Shop Practice I

2 credits: 4 hours lab/week - [Common Course Outline](#)

In this course students learn to use hand tools, portable power tools, and woodworking machines in a safe and efficient manner. A series of required woodworking projects are completed in the carpentry shop. (Prerequisites: None).

### CR 1622 Carpentry Theory II

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a study of interior and exterior finishes. Materials and installation procedures are discussed, explained, compared, and estimated. Building codes, sustainable green building and passive solar systems are presented. As a project, students design and estimate a wood frame deck. (Prerequisites: None).

### CR 1623 Rough Framing

5 credits: 10 hours lab/week - [Common Course Outline](#)

This course involves the initial framing of a new single family home. Students assemble floor systems, build exterior walls and frame the roof. Safe building practices and tools of the trade are introduced. Good work habits are established. (Prerequisites: None).

### CR 1625 Footing and Foundation

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course is a study and practice of building wood and concrete foundations. Students utilize survey equipment to locate property lines, set building corners, and establish grades and elevations. Students will build concrete footing and foundation wall forms. (Prerequisites: None).

### CR 1627 Roofing Systems

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course is a study of installation of finish roofing products. A variety of roof construction, framing and finishes are discussed. Sheathing, roof edge, underlayment, valley tin, flashing and asphalt shingles are installed. (Prerequisites: None).

### CR 1632 Construction Estimating

3 credits: 3 hours lecture/week - [Common Course Outline](#)

The focus of this course is to develop skills necessary to accurately estimate material and labor costs. Students perform material take-offs and draft estimates for various building projects. (Prerequisites: None).

### CR 1635 Shop Practices II

2 credits: 4 hours lab/week - [Common Course Outline](#)

In this course, students practice use of hand tools, portable power tools, and woodworking machines in a safe and efficient manner. Students build cabinets and woodworking projects using a variety of fastening techniques. Laminate counter tops and finished cabinets are installed. (Prerequisites: CR 1612).



### CR 1636 Interior Finishing

4 credits: 8 hours lab/week - [Common Course Outline](#)

This course provides an opportunity to install interior finishes to a new home. Students install hardwood, ceramic tile, and laminate floors, interior doors, casing, cabinets and hardware. (Prerequisites: CR 1600, CR 1610, CR 1612, CR 1623, CR 1625, CR 1627).

### CR 1637 Exterior Finishing

4 credits: 4 hours lab/week - [Common Course Outline](#)

This course creates opportunity for students to apply exterior finishes to a new home. Students will install windows, doors, siding, soffit, fascia trim and build columns, decks, and porches. Metal bending tools and a variety of soffit and siding saws will be used. (Prerequisites: None).

## CRIMINAL JUSTICE

### CRJU 1305 Introduction to Criminal Justice

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introduction to the American Criminal Justice System. Topics will include the police, courts, and correctional systems. (Prerequisites: None).

### CRJU 1308 Introduction to Corrections

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will cover the history and evolution of Corrections from early European times through present day America. It will then move to the current state of Corrections and the daily challenges that correctional officers go through. The student will also learn about the different types of offenders and inmates that they would be expected to work with daily. The class will also discuss the differences between Local, State and Federal institutions. (Prerequisites: None).

### CRJU 2122 Criminal Procedure

3 credits: 3 hours lecture/week - [Common Course Outline](#)

The major topics of this course include the content and meaning of the fourth, fifth, and sixth Amendment to the United States Constitution; the rules of arrest, search and seizure; the legalities of confessions; proper identification procedures; and court procedures. (Prerequisites: POFC 1105 or CRJU 1305; ENGL 1117).

### CRJU 2127 Juvenile Law and Procedure

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Juvenile Law and Procedure will cover a wide range of contacts that law enforcement, correctional and probation officers may have with juveniles. Minnesota Juvenile Statutes, Juvenile Court system and the philosophy and theory for dealing with juveniles are introduced. Juvenile delinquency, status offenses, juvenile traffic offenders and children in need of protection and services are discussed. (Prerequisites: POFC 1105 or CRJU 1305; ENGL 1117).

### CRJU 2215 Homeland Security/Defense

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course explores the concept of national, state and local defense with attention to the changing issues for the criminal justice system. Student will employ scientific theories and methods to analyze the changing roles of Military, law enforcement and private security in defense. Topics will include terrorism, weapons of mass destruction, civil rights and constitutional issues with defending the United States. (Prerequisites: POFC 1105 OR CRJU 1305, POFC 1112, ENGL 1117).

### CRJU 2315 Community Corrections and Probation

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course addresses the concepts and practices of community corrections. The specific content includes halfway house program activities, restitution projects and program coordination, work release activities, court diversion processes and programs, truancy tracking programs, and community outreach initiatives. (Prerequisites: CRJU 1305).



## DENTAL ASSISTANT

### DA 1200 Dental Communications

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

The first part of this course introduces the dental assisting student to the members of dental health team, training and credentialing requirements, methods of delivering dental care, and the professional dental organizations. The second component focuses on verbal and non-verbal communications and psychology as they relate to dentistry. The final component covers principles of dental jurisprudence and ethics. This course is to be taken the first year of the two year option. (Prerequisites: DA program admission).

### DA 1210 Dental Science I

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

Dental Science I covers anatomy and physiology of the teeth, the oral structures, and structures of the head and neck. Emphasis will be given to their anatomical parts, shape and form, clinical characteristics, development, and physiology. Dental Science I provides the student with foundation information required to effectively communicate and perform in a dental setting. This course is a prerequisite to all clinical courses in dental assisting and a prerequisite to Dental Science II. (Prerequisites: DA Program Admission is required).

### DA 1215 Dental Practice Management

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course focuses on developing skills as a dental business assistant. Topics include reception skills, business letter writing, telephone techniques, bookkeeping/accounting procedures, banking procedures, dental insurance, preventive recall programs, appointment scheduling, inventory control and management, general office procedures, and dental computer applications. This course also focuses on employment seeking skills to include preparation of resumes, job application letters, job application form, and follow-up letters and preparing for an employment interview. (Prerequisites: DA Program Admission is required).

### DA 1220 Chairside Assisting I

6 credits: 2 hours lecture/week - 8 hours lab/week - [Common Course Outline](#)

Chairside Assisting I covers the following fundamental areas of four-handed dentistry: dental office layout and design, dental equipment, operatory preparation, patient and team positioning; maintenance of the operating field; dental instruments and supplies, instrument transfer; patient management; taking patient health histories and vital signs, the principles of operative dentistry; assisting for oral diagnosis, oral prophylaxis, amalgams and composites; and recognition and treatment of medical/dental emergencies. This course should be taken concurrently with Dental Infection Control and is a prerequisite to Chairside Assisting II. (Prerequisites: DA Program Admission is required).

### DA 1225 Dental Infection Control

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

Dental Infection Control will prepare the dental assisting student to function aseptically and safely in the dental clinical environment. The course covers principles of microbiology and disease transmission, current concepts of infection control and hazard communication and management in dental practice. Course content will review requirements and protocols as recommended/required by the Centers for Disease Control, the Occupational Safety and Health Administration, the American Dental Association, and the MN Board of Dentistry. This course is a prerequisite to all dental assisting clinical courses. (Prerequisites: DA Program Admission is required).

#### DA 1230 Preventive Dentistry

2 credits: 2 hours lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course focuses on disease prevention. Specific emphasis is on the nature of healthy oral tissues, dental decay and periodontal disease, plaque removal techniques, gum stimulation techniques, nutrition, nutritional counseling, and patient dental education presentations. (DA Program Admission is required). (Prerequisites: None).

#### DA 1250 Dental Science II

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a course with four separate focuses. Introduction to Anatomy and Physiology will include an overview of the body layout and each body systems. Dental Charting will teach the student how to correctly record patient information, chart oral conditions, and service rendered. Oral Pathology reviews disease processes and dental disease conditions. Dental Pharmacology reviews a study of common drugs and therapies used in dentistry. (Prerequisite: DA 1210).

#### DA 1255 Dental Materials

4 credits: 2 hours lecture/week - 4 hours lab/week - [Common Course Outline](#)

Dental Materials is a study of the properties, uses, and manipulation of chairside and dental laboratory materials. These materials are used in the reconstruction and restoration of the teeth and oral structures. The students will have extensive laboratory experience with the chairside and dental laboratory materials. (Prerequisite: DA 1210).

#### DA 1260 Chairside Assisting II

4 credits: 2 hours lecture/week - 4 hours lab/week - [Common Course Outline](#)

Chairside Assisting II will introduce the student to basic concepts of assisting for each of the dental specialties; to include: Pediatric Dentistry, Fixed Prosthodontics, Removable Prosthodontics, Endodontics, Oral and Maxillo-Facial Surgery, Periodontics, Orthodontics, and Public Health (Community) Dentistry. For each specialty, the student will learn terminology, treatment techniques, instrument tray set-ups, procedural order, and patient pre-operative and post-operative instructions. For Community Health Dentistry, students will actively prepare and deliver oral health care presentations for a variety of community groups. (Prerequisites: DA 1220, DA 1225, DA 1230).

#### DA 1265 Expanded Functions

7 credits: 2 hours lecture/week - 10 hours lab/week - [Common Course Outline](#)

Expanded Functions I covers the theory and pre-clinical/clinical experiences required by the Minnesota Board of Dentistry in preparation for becoming a Licensed Dental Assistant in Minnesota. After the theory and demonstrations are presented, the students receive practical experience on manikins and patients under the direct supervision of the dental assisting instructors and the clinic dentist. Students will be required to demonstrate professional attitudes and communications, ethical decision-making, effective chairside assisting, dental infection control and hazards management and dental practice management. (Prerequisite: DA 1225).

#### DA 1270 Expanded Functions II

1 credits: 1 hour lecture/week - [Common Course Outline](#)

Expanded Functions II will provide the remainder of the required instruction in Minnesota Expanded Functions required to become a Minnesota Licensed dental assistant. This nitrous oxide-oxygen inhalation sedation course covers the theory and pre-clinical/clinical experiences required by the Minnesota Board of Dentistry to administer and monitor nitrous oxide inhalation sedation. (Prerequisite: DA 1225).

#### DA 1275 Dental Radiology

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course includes the history of radiology, theoretical concepts of the characteristics of radiation, the effects of radiation exposure, roentgenographic anatomy and pathology, radiographic exposure techniques, film processing and mounting, film evaluation, radiation biology and protection, and intra and extra-oral radiographic procedures. (Prerequisite: DA 1225).

#### DA 1280 Dental Assisting Internship

7 credits: 21 hours lab/week - [Common Course Outline](#)

This course is designed to provide the student with a meaningful occupational experience in dental assisting. A training plan will be developed for each student including three separate rotations in three different dental practices. Two internship rotations will be in a general dental practice and one internship rotation will be in a dental specialty practice. Seminars are part of the required internship experience and attendance is required. Successful completion of this internship is required to graduate from this accredited Dental Assisting Program (Prerequisite: Instructor permission required).

#### DA 2291 Dental Practice Management - Computer Applications

1 credits: hours/week vary - [Common Course Outline](#)

In this course students will have hands on experience in dental computer applications. Students will perform the following computers skills: creating and managing patient clinical records, dental charting, appointment scheduling, and accounting procedures. (Prerequisite: None).

#### DA 2292 Dental Infection Control/Hazards Mgmt Review

1 credits: 1 hour lab/week – [Common Course Outline](#)

The Dental Infection Control and Hazards Management Review course will prepare the dental assisting student to function aseptically and safely in the dental clinical environment. This course will review the principles of microbiology and disease transmission, current concepts of infection control, and hazard communication and management in dental practice. The review will address the requirements and protocols as recommended by the American Dental Association, The Occupational Safety and Health Administration, and the Centers for Disease Control. This course is a pre-requisite for any dental assisting clinical courses. (Prerequisites: DA program admission).

## DENTAL HYGIENE

### DH 1510 Principles of Dental Hygiene I

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is an introduction to the etiology and prevention of dental diseases, infection control, patient assessment, normal oral conditions, periodontal assessment, polishing, patient education and the history of the dental hygiene profession. (Prerequisites: BIOL 1217).

### DH 1511 Dental Hygiene Practice I

3 credits: 7.2 hours lab/week - [Common Course Outline](#)

This course is a practical laboratory session designed to introduce basic instrumentation techniques necessary for the practice of dental hygiene. The theory, functions and procedures introduced in DH 1510 will be applied. (Prerequisites: None).

### DH 1512 Oral Anatomy

4 credits: 4 hours lecture/week - [Common Course Outline](#)

The focus of this course is on the anatomical components and functions of the teeth and tooth supporting structures, soft tissue landmarks of the oral cavity, and dental terminology. Embryology and histology of the maxillofacial area and dental structures are emphasized. The skeletal structure, muscular function, blood supply, and innervations of the maxillofacial region will also be covered. (Prerequisites: BIOL 1217).

### DH 1520 Principles of Dental Hygiene II

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is designed to continue the student's education in the basic clinical theory, functions, and procedures necessary for comprehensive patient treatment with an emphasis on primary preventive measures, clinical dental hygiene skills and management of medical emergencies. (Prerequisites: DH 1510).

### DH 1521 Dental Hygiene Practice II

5 credits: 13.5 hours lab/week - [Common Course Outline](#)

This course is a continuation of Dental Hygiene Practice I introducing the student to basic clinical theory, functions, and procedures necessary for comprehensive patient treatment. Students will continue practice on student partners until all basic competencies are satisfied and will then begin treating patients in the clinical setting. (Prerequisites: DH 1510, DH 1511, and DH 1512).

### DH 1523 Oral Pathology

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is an introduction to the principles of general pathology and oral pathology, focusing on etiology, progression, clinical manifestations and treatment of pathologic conditions. The basic inflammatory and immune responses as they relate to the human body are reviewed. The course will focus on the fundamental disease processes involving the maxillofacial region. Emphasis is placed on early recognition and documentation of abnormal oral conditions. (Prerequisites: DH 1512, BIOL 1217).

### DH 1524 Periodontology

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is an examination of the pathogenesis, diagnosis, and treatment of periodontal disease. Emphasis will include the progression of periodontal disease, diagnostic methods, treatment modalities, and the role of the dental hygienist in the prevention and treatment of periodontal disease. (Prerequisites: DH 1510, DH 1512).

### DH 1525 Dental Imaging for Interpretation

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This is a lecture and laboratory course in current concepts of the principles of radiology and the use of imagery in dentistry. Designed to provide knowledge of radiation production and safety, operation of equipment, and interpretation of radiographic images. This course prepares students for decision making and critical analysis required in clinical practice. Lab sessions give the student experience in exposing, evaluating/correcting errors and interpreting dental radiographs for the dental hygiene care plan. (Prerequisites: DH 1510, DH 1511, DH 1512).

### DH 2530 Principles of Dental Hygiene III

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a continuation of Principles of Dental Hygiene II, with an emphasis on advanced dental hygiene skills and applied auxiliary skills. This course will familiarize the dental hygiene student with the properties and uses of various dental materials. The focus will be on composition, chemistry, and clinical application of commonly used materials in dentistry. (Prerequisites: DH 1510, DH 1520).

### DH 2531 Dental Hygiene Practice III

6 credits: 16.2 hours lab/week - [Common Course Outline](#)

This course is a continuation of Dental Hygiene Practice II with supervised clinical experience and a weekly seminar. Students will apply basic theories, functions and procedures necessary for comprehensive client treatment. (Prerequisites: DH 1521).

#### DH 2532 Pain Control

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This is a lecture and laboratory course in the basic and current concepts in the administration of local anesthesia and nitrous oxide/oxygen analgesia. The content areas include anatomical considerations, local anesthetic and nitrous oxide armamentarium, pharmacology and clinical action of local anesthetics and nitrous oxide, patient evaluation, local and systemic complications, techniques of maxillary and mandibular anesthesia and nitrous oxide administrations. (Other Requirements: DH 2533 concurrently). (Prerequisites: DH 1512 and DH 1521).

#### DH 2533 Dental Pharmacology

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is a survey of drug groups with special emphasis on the drugs in dentistry. The course will include content in the following: physical and chemical properties of the drugs covered, routes of administration, therapeutic and adverse effects, and drug interactions. (Prerequisites: CHEM 1117, DH 1520, DH 1521).

#### DH 2540 Principles of Dental Hygiene IV

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a continuation of Principles of Dental Hygiene III with an emphasis on management of patients with physical or mental disabilities and other special needs, and nutritional assessments. Focus will also be in, resume writing and job interviews, legal and ethical responsibilities of the dental team, alternative dental settings/dental specialties, and health care delivery issues. (Prerequisites: DH 2530).

#### DH 2541 Dental Hygiene Practice IV

6 credits: 16.2 hours lab/week - [Common Course Outline](#)

This course is a continuation of Dental Hygiene Practice III with supervised clinical experience and a weekly seminar. Students will apply basic and advanced theories, functions and procedures necessary for comprehensive client treatment. (Prerequisites: DH 2531).

#### DH 2542 Community Dental Health

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course encourages development of insight into community problems and understanding the dental needs of communities. It provides an understanding of how dental public health initiatives can meet the needs of the community. This course will provide working knowledge of dental and dental hygiene public health. The laboratory portion of the course is designed to assist the students in needs assessment, program planning, program implementation, funding, and program evaluation. (Prerequisite: None).



## DATA SCIENCE

### DSCI 2253 Applications for Analyzing Data

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces students to the growing field of Data Science. Students will learn about the foundational concepts and applications necessary to analyze data and make educated business or research decisions. Students will utilize various software applications, including databases, to process and visualize data for analysis and reporting. (Prerequisites: COMP 1150 or concurrent enrollment in COMP 1150).

### DSCI 2257 Programming Libraries for Analyzing Data

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides students additional exposure to Data Science. Students will learn how to explore machine learning techniques, manage large data sets and define methods for improving the performance of computerized statistical models. (Prerequisites: COMP 1150).

## ENGLISH FOR ACADEMIC PURPOSES

### EAP 0801 Integrated Skills

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to develop the academic vocabulary and reading skills of English Language Learners to better prepare them for mainstream academic courses. Emphasis will be placed on expanding vocabulary and introducing students to basic grammar principles of the English language. (Prerequisites: None).

### EAP 1001 Intermediate Writing and Grammar

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces English learners to academic writing at the intermediate level. Students will improve their ability to write complex sentences, coherent paragraphs, and essays. They will also become familiar with the steps of the writing process, as well as the evaluation and effective use of sources in their writing. (Prerequisites: None).

## EARLY CHILDHOOD CARE AND EDUCATION

### ECCE 1001 Introduction to Early Childhood Care and Education

2 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

A career working with young children is based on respecting, valuing, seeing, hearing, and attending to children with compassion. This course helps students build attuned, responsive relationships with children. In addition, this course examines the profound influence of the early years on children's lifelong learning and development, the history, principles, and key elements of high-quality early childhood care and education. Students will begin to build their practices of effective teaching through meaningful conversation, asking questions, building professional knowledge, thinking deeply, self-reflection, and collaboration with others. (Prerequisites: READ 0900).

### ECCE 1210 Child Growth and Development

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to provide an overview of typical development from birth through adolescence, including physical, social/emotional, and cognitive development. It integrates developmental theory with appropriate practices in a variety of caregiving, community and educational settings. An understanding of child development is essential for future educators as they care for and educate children in these various settings. (Prerequisites: READ 0900).

### ECCE 1220 Health, Safety and Wellness

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

Young children are extremely vulnerable and need protection. Early childhood care and educators must ensure and promote children's health and well-being by providing safe environments, active supervision, meeting children's physical needs, and teaching children how to enjoy a healthy lifestyle. Students will examine physical and mental distress, nurturing children's mental health, recognizing child abuse and neglect, addressing substance abuse, increasing access to healthy food, promoting nutrition, providing safe environments, preventing obesity, fostering sensory and physical development, and connecting children with nature. (Prerequisites: READ 0900. Other Requirements: Successful completion of a background check).

### ECCE 1232 Positive Guidance and Social-Emotional Development

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

Self-regulation, executive function, and social skills are the biggest predictors of school success. Effective early childhood teachers establish warm sensitive relationships with children, communicate positively, foster a sense of belonging and community, establish routines, model empathy, reinforce positive behavior, prevent challenging behavior, and teach a variety of social skills. Students will apply their knowledge of social-emotional development to support children's healthy social-emotional development, engagement with others, and academic success. (Prerequisites: READ 0900. Other Requirements: Successful completion of a background check).

### ECCE 1235 Intentional Teaching Through Learning Environments

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

Young children approach learning with awe, wonder, enthusiasm, and imagination. They are explorers, investigators, inventors, creative thinkers, risk takers and knowledge creators. Intentional teachers recognize how children learn, organize classrooms, use a variety of teaching methods, listen to children, wonder with children, model advanced language, challenge children to dig deeper, and invite children to express themselves in a variety of ways. Students in this course will create beautiful learning environments, select and display interesting materials, engage in meaningful interactions with children, and present rich learning opportunities based on children's interests and abilities. (Prerequisites: READ 0900. Other Requirements: Successful completion of a background check).

### ECCE 1320 Observing and Assessing

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

Children show what they know and can do through everyday experiences. Effective early childhood teachers carefully observe children throughout the day to understand children's perspectives, interpret their development, plan curriculum, and document learning. This course builds on knowledge of child development through the study of naturalistic observation, authentic assessment, screening, formal evaluation, and documentation of learning. Students will use a variety of informal observation methods that document child's development, rate a child's development using an assessment tool, and interpret and analyze assessment results to support curriculum planning and facilitate learning. (Prerequisites: ENGL 1117 and CYFS/ECCE 1210. Other Requirements: Successful completion of a background check).

### ECCE 1505 Family Relations

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Children are born into and experience belonging and connectedness in their families, culture, and community. Early childhood educators recognize that families are the child's first and most important teacher, that children come from many different backgrounds, and that children thrive when culturally responsive practices provide continuity of care and learning. This course examines family-centered care, cross-cultural communication, culturally responsive practices, and family engagement to promote children's development and academic success. Students will demonstrate relationship-based practices, articulate a family-centered approach to early childhood care and education, and plan for culturally relevant care and education. (Prerequisites: READ 0900).

### ECCE 2110 Diversity and Human Relations (MnTC 07)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

All children are harmed by societal injustice and educational practices that ignore diversity. They need adults who can foster a positive identity, encourage them to embrace diversity, help them recognize unfairness, and empower them to resist bias. This course examines how human relations shape identity development, life experience, and academic success in a diverse society. Students will explore their own attitudes toward gender, class, race, culture, disability and sexual orientation and strategies that provide respectful, responsive, empowering, and equitable environments that embrace human diversity. Recommended skill level: college-level reading and writing. (Prerequisites: READ 0900. Other Requirements: Recommended skill level: College-level reading and writing).

### ECCE 2250 Foundations of Language and Literacy

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Children learn to talk, read, and write in the early years. Effective early childhood teachers use the language of learning, select meaningful children's books, tell stories, provide materials that invite children to experiment with print, and support dual language learners. This course focuses on language and literacy development with an emphasis on promoting early literacy skills, concepts of print, phonemic awareness, vocabulary, comprehension, and writing. Students will develop resources, select materials, set up provocations, and practice strategies that support language and literacy development of young children. (Prerequisites: ENGL 1117).

### ECCE 2630 Teaching Young Children with Special Needs

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course examines disabilities, disorders, and developmental delays of children and the impact on families. Emphasis is on identification, person-first language, highly individualized teaching, and learning, and supporting children's understanding of disabilities and people with special needs. Students will develop the knowledge, skills, and dispositions to support children and families with special needs and promote children's identity, belonging, and self-esteem. (Prerequisites: CYFS 1210 and CYFS 1235).

## ECCE 2810 Practicum I

3 credits: hours/week vary - [Common Course Outline](#)

This course fosters the student's development as a teacher through a 150-hour capstone experience working alongside a skilled teacher in a high-quality early childhood program. Students will demonstrate professional knowledge, dispositions, and practice as they apply the concepts and teaching strategies gained in previous coursework. In addition, students meet regularly to review, reflect, and document learning in order to strengthen their teaching practice. The course culminates with a student showcase. Must complete in a four-star setting under the supervision of a licensed teacher and satisfactorily pass Net Study. (Prerequisites: ENGL 1117, ECCE 1232, ECCE 1235, and ECCE 1320. Other Requirements: Must complete in a four-star setting under the supervision of a licensed teacher and satisfactorily pass Net Study).

## ECONOMICS

### ECON 1101 Introduction to Economics (MnTC 05, 10)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides a general economics education for both non-major transfer students and for career students. Content includes the nature of product markets and resource markets; current issues such as price ceilings, price floors, unemployment and inflation; and public policy perspectives pertinent to national fiscal and monetary affairs, and trade with other countries. Because of its general nature, this course is not a substitute for in-depth ECON 2214 or ECON 2215. (Prerequisites: None).

### ECON 2214 Principles of Economics: Micro (MnTC 05, 10)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course provides in depth understanding of microeconomic behaviors by consumers and business leaders in markets that illustrate perfect competition, monopoly, oligopoly, and monopolistic competition. Concepts include supply and demand, marginal analysis, efficient resource allocation, and profit or loss. Contemporary issues may include wage determination, or income distribution, or regulation of industry, or irregularities like price discrimination. Public policy perspectives may include economic insight about externalities (such as climate control, education, vaccines, pollution, or over-population). (Prerequisites: MATH 1113 or 1115).

## ECON 2215 Principles of Economics: Macro (MnTC 05, 08)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course provides in depth understanding of macroeconomic theory and practice. Emphasis is placed on free markets and capitalism. Keynesian theory or aggregate supply and demand are used to explain business fluctuations. Aggregate data collection and use (such as GDP, unemployment, inflation, money supply, and interest rates) are basic concepts. International trade or finance and policy-making at the national and international levels are important issues with perspectives grounded in macroeconomic principles. The real-side and the monetary-side of the economy are presented. (Prerequisites: MATH 1113 or MATH 1115).

## EMERGENCY MEDICAL CARE

### EMC 1121 First Responder

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is designed for students who will be in law enforcement or in another position where they will be responding to emergencies and accidents. It includes CPR, vital signs and handling trauma to the musculoskeletal system and a variety of other emergencies listed in the course outline. Upon successful completion, participants are eligible for National Registry and State certification as a 1st Responder. (Prerequisites: Enrolled in Peace Officer or consent of instructor and READ 0900).

## EMERGENCY MEDICAL TECHNOLOGY

### EMT 1200 Emergency Medical Technician: Basic

8 credits: 3 hours lecture/week - 10 hours lab/week - [Common Course Outline](#)

The Emergency Medical Technician course follows the National Emergency Medical Services Education Standards curriculum. This course is the base training for ambulance personnel. The topics covered include anatomy and physiology, airway management, cardiac emergencies, medical emergencies, trauma emergencies, NIMS (Incident Command), and the special populations (OB/GYN, Pediatrics, and Geriatrics). Upon successful completion of the course, participants are eligible to test the National Registry of Emergency Medical Technicians Psychomotor and Cognitive Exams. (Prerequisites: None).

## ENGLISH

### ENGL 0960 Introduction to College Writing

4 credits: 4 hours lecture/week - [Common Course Outline](#)

In this writing-intensive course, students will practice the process of writing as a recursive practice and learn strategies for planning, drafting, and revising their own work. Students will read and analyze others' writing and respond to it critically. The aim of the course is to prepare students for college-level writing. Students should score appropriately on the college placement test. (Prerequisites: None).

### ENGL 1109 Introduction to Professional and Technical Communication (MnTC 01, 09)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on the types of writing found in business, professional and technical settings. Students learn to plan, write, revise, and present a range of technical documents following the format and style guidelines of their profession. Textual and visual elements of design are studied and utilized, as well as internet-specific document design and presentation. Collaboration, communication in the professional setting, and technical documentation for the students field of study are included. The ethical responsibilities of writer to their organizations, audiences, and society are recurring theme. Recommended skills include: college level reading and writing. (Prerequisites: None).

### ENGL 1117 Reading and Writing Critically I (MnTC 01)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course introduces students to various writing strategies for single and multi-source essays. By critically reading and responding, students will practice expository, analytical, and persuasive modes of communication to develop critical thinking and writing skills, culminating in limited research projects. College level reading and writing skills as demonstrated by appropriate RCTC placement test score or completion of appropriate developmental course(s) with a grade of C or better required. (Prerequisites: None).

### ENGL 1118 Reading and Writing Critically II (MnTC 01)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

English 1118 fosters an appreciation of literature through reading and writing about a variety of literary works. Continuing the development of critical thinking skills begun in ENGL 1117, the course emphasizes literary argument and concludes with a major research project in which students demonstrate their expertise in finding, evaluating, using, and documenting outside sources. Students will define and develop their aesthetic by means of evaluating, analyzing, and drawing conclusions about both primary and secondary texts. (Prerequisites: Completion of ENGL 1117 with a grade of C or better).

ENGL 1125 Women's Perspectives (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on the genre of women's autobiography and memoir. Students will read and analyze autobiographical accounts of women from different parts of the world. This writing-intensive course will examine how the various forms of autobiography and memoir have preserved history and culture of women from varied cultures, classes, religions, and ethnic groups. College level reading and writing skills are recommended. (Prerequisites: None).

ENGL 1150 Introduction to Creative Writing (MnTC 06)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course allows students to explore a range of genres as they practice writing, revising and presenting creative writing. Students will explore introductory writing techniques applicable to creative writing, and will apply these skills to projects in poetry, fiction, creative nonfiction, and/or drama. (Prerequisites: None).

ENGL 2252 Writing Poetry (MnTC 06)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course instructs students in writing and interpreting poetry. By experimenting with a variety of exercises, forms, and techniques, students learn to create, revise, and present their own poetry. Through group work, readings, and class activities, students also become more proficient in the explication, interpretation, and evaluation of poetry. (Prerequisites: None).

ENGL 2255 Introduction to Shakespeare: Screen, Stage, and Page (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

In this course, students will read, watch, discuss, and analyze some of Shakespeare's major works, such as comedies, histories, tragedies, romances, and poetry. The course will deal with the historical Elizabethan context in which these works were created and the impact that these works have had on later plays, films, poetry, and popular culture. This course will also emphasize the aesthetic value of Shakespeare's work and how this value creates a continuing influence in literature, drama, and cinema. College level reading and writing skills recommended. (Prerequisites: None).

ENGL 2260 Special Topics in Literature (MnTC 06, 07)

Credits and hours/week may vary. - [Common Course Outline](#)

This course focuses on a topic chosen by the instructor teaching the course. It could focus on an author or a group of authors, a period, a literary genre, or a theme. Generally, the focus is one that is more in depth than that found in introductory literature courses. Specific course content and number of credits may vary. The course is writing intensive. The course may be repeated if the focus of the class changes. College level reading and writing is recommended. (Prerequisites: None).



ENGL 2276 Introduction to Literary Studies: Best Sellers (MnTC 06, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course examines the definitions, history, and trends of best sellers. The effects of marketing, of films made from books, and of publicity surrounding current events are analyzed. Students evaluate and analyze the scope and variety of best sellers, with special attention to the diversity or lack of diversity represented in best sellers. This course is writing intensive. College level reading and writing recommended. (Prerequisites: None).

ENGL 2282 Dystopian Literature (MnTC 06, 09)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a survey of major works of dystopian literature/fiction. In its portrayals of future societies, dystopian literature often offers critical commentary about contemporary socio-cultural, political, and/or scientific trends from the mid 20th century until the present. Works of literature/fiction studied in this course may include classics such as Brave New World, 1984, and The Handmaid's Tale as well as more contemporary works such as The Hunger Games. College-level reading and writing recommended. (Prerequisites: None).

ENGL 2283 African American Literature (MnTC 06, 09)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a survey of African American literature. Students will read and respond to stories, poems, novels, and other narratives in the rich tradition of African American literature. Emphasis is placed on understanding the cultural, political, and social contexts surrounding the texts. Major writers like Ellison, Hughes, and Morrison may be covered in this course. (Prerequisites: None).

ENGL 2284 Literature and the Environment (MnTC 06, 10)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Students will read and examine a number of primary texts in order to explore answers to a key question - How shall we live? In order to develop an appreciation of environmental literacy, students will be introduced to a wide variety of texts that have influenced our understanding of the natural world. Field trips and/or service-learning projects may be part of the course. College-level reading and writing recommended. (Prerequisites: None).

ENGL 2290 Fiction Writing (MnTC 06)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course emphasizes improving students' ability to read and critique fiction as aspiring writers and to write fiction. Other topics: Elements of fiction, Approaches to reading fiction as writers, and Process for generating ideas, writing, and revising. (Prerequisites: ENGL 1117 and ENGL 1118; or permission of instructor).

### ENGL 2297 Children's Literature (MnTC 06, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course serves as an introduction to the traditions of and issues within children's literature, as well as to the literature itself. Books for children approximately ages 0-12 will be surveyed in terms of text, illustrations, and multi-media interpretations; standards and criteria for evaluating good literature will evolve through reading, discussion, research, and writing. A variety of literature will be explored in the areas of fantasy, realistic fiction, nonfiction, and poetry. A common thread will be equity and inclusion, with a focus on representation: who tells the stories for children, about whom, and how. (Prerequisites: None).

### ENGL 2298 Young Adult Literature (MnTC 06, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a study of literature written for and read by young adults, approximately between the ages of 12-18. In addition to examining characteristics of literary genres within young adult literature, students will consider current market trends and how literature for young adults is used as a basis for other artistic forms, such as film and other media.

Students will study specific works of literature, both classic and contemporary and become familiar with the application of young adult literature in middle and secondary school curricula by activities such as preparing lesson plans, study guides, discussion questions, and writing assignments. Students will consider the developmental stage we call adolescence, whether this stage has changed significantly with recent societal changes, and how literature may reflect and/or support those changes. College level reading and writing is recommended. (Prerequisites: None).

## ENGINEERING

### ENGR 1101 Introduction to Engineering

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course helps students gain an understanding of the profession of engineering, the pathway to an engineering career, and knowledge of the different fields of engineering. Hands-on projects and invited speakers will be included. Knowledge gained will be applied by students to guide their engineering education and to help in determining their career choice. (Prerequisites: None).

### ENGR 1152 Logic Design

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course covers fundamental digital circuit design. Topics include truth tables, Boolean algebra, Karnaugh maps, logic gates, digital devices, sequential systems, flip-flops, counters, and design involving these elements. The accompanying laboratory provides hands-on experience designing, building, and testing digital circuits. (Prerequisites: MATH 1115 or higher (may be taken concurrently)).

#### ENGR 2211 Statics

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is the study of rigid body dynamics in equilibrium. Topics include forces and moments in three dimensions, the equations needed to solve these systems, and the analysis of structures, trusses, frames, mechanisms, and statically determinate beams and cables. The nature and influence of friction on a static system is studied. Three dimensional vector analysis and integral calculus are used. (Prerequisites: PHYS 1127, MATH 1127).

#### ENGR 2212 Dynamics

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is the study of rigid body dynamics in fixed and rotating systems, including the analysis of systems moving with linear accelerations and/or angular accelerations to determine the reaction forces and moments of force acting on the various components of the system. The time dependent analysis of vibrating/rotating systems is studied. Extensive use is made of vector analysis and calculus. (Prerequisites: ENGR 2211, MATH 1128).

#### ENGR 2213 Linear Circuit Analysis I

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a study of linear circuits, wherein techniques for the solution and ultimate understanding of electric circuits are studied. Topics include mesh analysis, nodal analysis, Thevenin's and Norton's methods for source transformations, equivalent circuits, natural and step response to RLC circuits, and sinusoidal steady state analysis with phasors. The accompanying integrated laboratory allows students to study, measure, and troubleshoot these circuits. (Prerequisites: MATH 1128, PHYS 1128).

#### ENGR 2214 Linear Circuit Analysis II

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a study of linear circuits. The more rigorous methods for the solution and ultimate understanding of electric circuits are studied, including the methods of Laplace transforms. Complex circuits involving filters are studied. Operating characteristics of semiconductor devices are explained. The accompanying integrated laboratory allows students to study, measure, and troubleshoot these circuits. (Prerequisites: ENGR 2213, MATH 2238).

#### ENGR 2221 Deformable Body Mechanics

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is concerned with the deformation of materials under stress, including the study and analysis of simple stress and strain, shear and bending moment, flexural and shearing stresses in beams, combined stresses, deflection of beams, statically indeterminate members, and columns. (Prerequisites: ENGR 2211, MATH 2238).

## EARTH SCIENCE

### ESCI 1004 Earthquakes and Volcanoes (MnTC 03, 10)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course examines the causes and effects of earthquakes and volcanic activity. It also covers the impacts of earthquakes and volcanic eruptions, including secondary effects such as landslides, mudflows, and tsunamis; climatic effects; energy/mineral resources; and social disruption. Additionally, the mitigation of effects of natural disasters will be included. (Prerequisites: None).

### ESCI 1101 Principles of Geoscience (MnTC 03, 10)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course explores our planet and how it works. It surveys basic concepts of shifting tectonic plates, deep geologic time, earthquakes, volcanic eruptions and the nature of rocks and minerals. Laboratory exercises will introduce students to the methods of geoscience and will supplement the lectures. Non-science majors will benefit from this course. (Prerequisites: None).

### ESCI 1114 Minnesota Rocks and Waters with Lab (MnTC 03, 10)

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This is a physical geology lab course with an emphasis on Minnesota. The focus is on the processes that shaped our state and our world. The course explores the connections between the rocks and waters and the people and the economy. We explore the rock cycle (minerals, rocks, volcanic activity, weathering and soils) using local examples. We also examine the geologic history and fossils of Minnesota as we investigate deep time. Students will strive to understand the forces that shaped our state such as glaciers, rivers, lakes, groundwater, mass movement and earthquakes. Both science and non-science majors will benefit from this course. (Prerequisites: None).

### ESCI 1124 Solar System Astronomy (MnTC 03)

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a survey of the solar system. It includes study of the Earth and Moon, the planets and their satellites as well as asteroids, meteors and comets. Study includes the history of astronomy from ancient times leading up to our modern view of the sun and planets. Topics include light and telescopes, planetary surfaces and atmospheres and the origin of planetary systems. Students will also be introduced to striking beauty of our solar system as revealed through images and direct experience through the telescope. Lab work is supplemented by astronomical observations at the RCTC observatory. (Prerequisites: None).

### ESCI 1134 Stellar Astronomy (MnTC 03)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is an introduction to stellar astronomy for the non-science major. The course covers topics that include light and spectra, the sun, stars, galaxies, supernovae, black holes and the Big Bang. In addition, students will be introduced to the stunning beauty of the universe as revealed in images, written works, and direct experience through the telescope. Laboratory exercises introduce students to the methods astronomers use to study the universe. Lab work is supplemented by astronomical observing sessions at the RCTC Observatory. NOTE: ESCI 1134 and PHYS 1134 are cross-listed. Students may take one or the other for credit but will not receive credit for both. (Prerequisites: None).

### ESCI 1144 Introduction to Environmental Geology (MnTC 03, 10)

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course examines the relationship between geology and short-term human concerns (periods of no more than a few hundred years). Topics include earthquake hazards, volcanoes, flooding, landslides/mass wasting, groundwater and surface water problems, radioactive waste disposal, energy and mineral resources and radon. Environmental issues and effects on society are a major focus. (Prerequisites: None).

### ESCI 1154 Introduction to Meteorology (MnTC 03, 10)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will introduce students to our atmosphere and how variables in the atmosphere affect our daily and seasonal weather patterns. Students will gain an understanding of how weather occurs and how the atmosphere affects us individually and as a society. Other topics include tornadoes, hurricanes, air pollution and climate change. This course contains a lab-like component. (Prerequisites: None).

## FRENCH

### FREN 1101 Beginning French I (MnTC 06, 08)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is an introduction to French language and culture within the context of daily life in French-speaking regions worldwide. Students will develop communication skills in speaking, listening, reading and writing. Sensitivity to cultural differences is emphasized. Designed for the student with no previous foreign language study. (Prerequisites: None).

### FREN 1102 Beginning French II (MnTC 06, 08)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is a continuation of FREN 1101. This course focuses on Learning French language and culture within the context of daily life in French-speaking regions worldwide. Students will develop communication skills in speaking, listening, reading and writing. Sensitivity to cultural differences is emphasized. (Prerequisites: None).

## FACILITY AND SERVICE TECHNOLOGY

### FST 1500 Power Plant Theory

3 credits: 4 hours lecture/week - [Common Course Outline](#)

This course uses slides, lectures, discussions and worksheets. Students will study the theory and proper operations of Low and High pressure Boilers to include steam turbines and steam engine operations. Topics will include boiler types, designs, uses, steam systems, fittings, and accessories. (Prerequisites: Enrollment in the FAST program or instructor permission).

### FST 1510 Welding Theory and Safety

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course covers actual use of arc, gas, M.I.G, and T.I.G. welding along with proper safety and equipment care. Recommended Skills/Knowledge: Basic technical skills/knowledge: High School Diploma or GED. (Prerequisites: None).

### FST 1520 Welding and Equipment Repair

1 credits: 2 hours lab/week - [Common Course Outline](#)

This course allows students to weld various projects using Oxy-Acetylene (GTAW, GMAW, SMAW). Skills will include braze welding, metal cutting, using shears, plasma cutters, and flame cutters. (Prerequisites: None).

### FST 1530 Plumbing Plant Theory

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course covers various aspects of the plumbing trade. Consideration will be given to sanitary and waste systems along with proper venting. (Prerequisites: None).

### FST 1540 Power Plant Operation

4 credits: 8 hours lab/week - [Common Course Outline](#)

This course will provide students the opportunity to operate a High-Pressure Boiler, turbine generator, related appurtenances and connect to the electric grid. Students will become familiar with fittings, accessories, water treatment, computerized controls, fuels, and combustion and flue gas analysis. Power Plant operations such as OSHA safety and EPA regulations will be discussed. Student will also earn required boiler hours toward the Minnesota 2A operator's license. (Prerequisites: Enrollment in the FAST program or instructor permission).

### FST 1550 Plumbing Lab

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course provides actual plumbing situations that will be encountered, and students will solve plumbing installation problems. Other activities include using pipe, wrenches, identifying different types of pipe and fittings, and establishing proper draining. (Prerequisites: FST 1530).

### FST 1560 Basic Pneumatic/Hydraulics

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course prepares students in the field of fluid power. It consists of hydraulic principles including system components, diagrams, drawings, trouble shooting, and system maintenance. The basic relationships of force, work, energy, and the different types of compressors will also be addressed. (Prerequisites: None).

### FST 1570 Basic Boiler Theory

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course is a preparatory class for the MN Special Engineers License using videos, CDs lectures and class discussions. Materials covered will include, Minnesota Boiler Statues, Heat transfer theory, Boiler design, Boiler systems, fittings and accessories, fuels and combustion, Boiler maintenance, inspections and operating conditions will also be discussed. (Prerequisites: Enrollment in the FAST program).

### FST 1611 Basic Electricity

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course covers the basic concepts of AC and DC electricity. Included are voltage, current, resistance, and power usage in series, parallel, and combination circuits. Safety while working on high voltage circuits and equipment will also be discussed. Requires admission into the FAST Program and have completed all FST 1500 courses with a grade of "C" or above. (Prerequisites: MATH 1015).

### FST 1621 Electrical Theory I

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers wiring layout for general lighting circuit sand switches in residential applications. The basic theory of inductors, capacitors, resistors, SCR's, diodes, transistors, and AC electric motors is also presented. The student will also examine the basic design and installation of electric motor controls. (Prerequisites: MATH 1015).

### FST 1631 Electrical Lab I

3 credits: 6 hours lab/week - [Common Course Outline](#)

This course covers the basic theory, operation, and practical applications of industrial electronics, electric motors, AC-DC circuits, and general wiring diagrams in commercial applications. In this course students will also learn motor control requirements including control symbols, line diagrams, wiring diagrams, inlays, contacts, and starters. (Prerequisites: MATH 1015).

### FST 1641 Electrical Theory II

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will allow students to continue to examine the basic design and installation of electric motor controls. The theory and applications of single-phase and three-phase transformers are also covered. The theory of programmable controllers and advanced motor controls is also presented. (Prerequisites: MATH 1015).

### FST 1651 Electrical Lab II

3 credits: 6 hours lab/week - [Common Course Outline](#)

This course provides the student with advanced motor control applications including jogging, counting, braking, plugging, reduced voltage starting, and latching relays. The theory, operation, installation, and practical application of programmable controllers are covered. Solid-state motor controls are also covered. Finally, the application and characteristics of single-phase and three-phase transformers are covered. Requires FAST Program Admission and completion of all FST I courses with a grade of C or better. (Prerequisites: MATH 1015).

### FST 1661 Electrical Safety National Electric Code

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course covers the Minnesota licensing requirements and presents the National Electric Code. Topics included from Code are branch circuits, feeders, general requirements, over current protection, grounding, conductors, and electrical safety. (Prerequisites: MATH 1015).

### FST 2500 Refrigeration Theory

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers fundamentals of refrigeration, tools and materials, basic refrigeration systems, compression systems, refrigerant controls, refrigerants, and small domestic applications. The course also includes the principles of installing and servicing small hermetic systems. (Prerequisites: FST 1651).



#### FST 2506 Refrigeration Lab

3 credits: 3 hours lab/week - [Common Course Outline](#)

This course covers lab experiences working with safe lab practices, tools, tubing, refrigeration system components, refrigerants, refrigerant recovery, recycle, reclaiming, system evacuations, and proper testing equipment usage. The course builds on the basic knowledge of refrigeration systems. (Prerequisites: FST 1651).

#### FST 2512 Commercial Refrigeration Theory

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers fundamentals of Commercial and Special Refrigeration systems including normal and advanced component identification, diagnosing, and troubleshooting. These concepts will be applied in FST 2518. (Prerequisites: FST 1651).

#### FST 2518 Commercial Refrigeration Lab

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course covers lab experience in commercial refrigeration. Students will operate and troubleshoot refrigeration equipment including compressors, flow controls, and heat exchangers. (Prerequisites: FST 1651).

#### FST 2555 Facility & Service Technology Internship III

5 credits: hours/week vary - [Common Course Outline](#)

This course is designed to provide the student with a purposeful occupational experience in the Facility and Service Technology field. Each internship experience is individualized. A training plan may be created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program. A total of 225 hours of on-the-job training is required. (Prerequisites: FST 1651).

#### FST 2602 HVAC/Refrigeration Systems Theory

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course covers HVAC principles. This includes gas and oil-fired furnaces, hydronic heating systems, heat pump systems, air conditioning installation practices and air distribution systems. This course will also cover indoor air quality measurements concerns and issues including comfort and psychometrics. (Prerequisites: FST 2518).

#### FST 2612 HVAC/Refrigeration Systems Lab

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course covers HVAC operational principles. This includes operating, testing and analyzing gas and oil-fired furnaces, hydronic heating systems, heat pump systems, air conditioning including installation practices and operations air distribution systems. This course will also cover indoor air quality measurements concerns and issues including comfort and psychometrics. Recommended skills and knowledge in electrical with mechanical aptitude. Recommend completion of FST II courses or electrical background. (Prerequisites: FST 2518).

#### FST 2622 HVAC Control Systems Lab

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course covers HVAC Control installation, wiring, and testing. Topics include commercial heating and cooling systems and commercial air handling units and the installation, testing and analyzing pneumatic control systems hybrid control systems and components. Installation, wiring, commissioning, and testing of building automation systems and controllers, inputs and outputs is addressed. (Prerequisites: FST 2518).

#### FST 2632 HVAC Control Systems Theory

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers HVAC Control principles, including commercial heating and cooling systems, air handling units, control principles, pneumatic control systems and components. The course topics also include building automation systems and controllers, inputs and outputs, installation, wiring, and testing including hybrid control systems. (Prerequisites: FST 2518).

#### FST 2651 Facility and Service Technology Internship I

1 credits: hours/week vary - [Common Course Outline](#)

This course is designed as an individual study to provide the student with additional occupational experience in the Facility and Service Technology field. Each internship experience is individualized. A training plan may be created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program. Up to 50 hours of on-the-job training are required. (Prerequisites: None. Other Requirements: Instructor permission).

#### FST 2655 Facility & Service Technology Internship IV

5 credits: hours/week vary - [Common Course Outline](#)

This course is designed to provide the student with a purposeful occupational experience in the facility Service and Technology field. Each internship experience is individualized. A training plan may be created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program. A total of 225 hours of on-the-job training is required. (Prerequisites: FST 2518).

## FST 2661 Facility & Service Technology Internship II

2 credits: hours/week vary - [Common Course Outline](#)

This course is designed as an individual study to provide the student with additional occupational experience in the Facility and Service Technology field. Each internship experience is individualized. A training plan may be created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program. Up to 100 hours of on-the-job training are required. (Prerequisites: None. Other Requirements: Instructor permission).

## FIRST YEAR EXPERIENCE

### FYEX 1000 College Success Strategies

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course introduces proven strategies to help students create greater success in college. It provides an active environment for students to identify and engage in choices that promote successful academic and career decision-making. Students will also explore campus resources, learning preferences, and active learning strategies. (Prerequisites: None).

## GEOGRAPHY

### GEOG 1614 Human Geography (MnTC 05, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introductory study of the human geography of the world in terms of the spatial distribution of cultural and physical phenomena, and the philosophical analysis of the interrelationships of those elements. College level reading and writing skills recommended. (Prerequisites: None).

### GEOG 1615 Economic Geography (MnTC 08, 10)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is the study of the spatial distribution of global economic activities and resources. In this course we consider the natural, cultural, human effects and influence on the economic system. Analysis will include resource use and abuse, environmental factors, and international and economic relations. Prerequisites: None).

## HEALTHCARE OFFICE PROFESSIONAL

### HCOP 1610 Medical Terminology: Body Systems and Diseases

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is an introduction to medical terminology as it relates to body systems and diseases including building of medical words utilizing suffixes, prefixes, and combining forms. The focus will be on organization of the body, healthcare system terminology, common diseases, procedures, and tests associated with each specific body system. This course is designed to help students prepare for a variety of professional and paraprofessional careers in the medical field. (Prerequisites: None).

### HCOP 1620 Medical Terminology for Health Professions

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introduction to medical terminology as it relates to body systems and diseases including building of medical words utilizing suffixes, prefixes, and combining forms. The focus will be on organization of the body, healthcare system terminology, common diseases, procedures, and tests associated with each specific body system. This course is designed to help students prepare for a variety of professional and paraprofessional careers in the medical field. (Prerequisites: None).

### HCOP 1630 Healthcare Office Fundamentals

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers healthcare office career information, medical ethics, and professional accountability. Topics covered will include healthcare office and reception tasks, electronic medical records, medical insurance and billing, scheduling patient appointments, and communicating effectively with patients and other office employees. (Prerequisites: None).

### HCOP 1640 Healthcare Office Documentation

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course introduces formatting and transcription skills of healthcare documentation in a variety of medical specialties. Dictation is transcribed from various diverse backgrounds. Keyboarding speed and accuracy will continue to be developed. Emphasis will be on developing and improving editing and proofreading skills. (Prerequisites: None).

## HEALTH INFORMATION MANAGEMENT CAREERS

### HIMC 1800 Legal Aspects of Health Information

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course covers the application of legal principles, policies, regulations, and standards for the control and usage of consent and release of Information forms used in medical facilities. Ethical and bioethical practices will be explored. An overview of current health legislation will be included. (Prerequisites: None) (Other Requirements: College level reading skills)

### HIMC 1820 CPT Coding

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course provides a study of the CPT (Current Procedural Terminology) coding system using sample exercises and medical records to develop skill and accuracy in procedural coding in various settings. Students will continue using the principles of coding to ensure proficiency in coding with CPT-4 using records and advanced concepts of coding. Students will adhere to current regulations and established guidelines in code assignment. (Prerequisites: BTEC 1620/HCOP 1620, BIOL 1107, HIMC 2600. Other Requirements: College-level reading skills: Appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

### HIMC 1840 Introduction to Health Records

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is a study of the development and integrity of the health record and health information professional. Definition and application of techniques necessary for assurance of adequate documentation and confidentiality of health care in the health record (patient information systems) will be addressed. (Prerequisites: None). (Other requirements: College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

### HIMC 1850 Computerized Health Information

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course introduces the student to the vital role information processing plays in health care delivery. Basic concepts of health information systems will be introduced and applied including electronic data collection, storage, retrieval, and other applications. Current medical software will be utilized. (Prerequisites: None. Other Requirements: College-level reading and writing skills: Appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

#### HIMC 1910 Reimbursement

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course provides a study of numerous health insurance plans, reimbursement methodologies, and compliance strategies. Students will adhere to current regulations and established guidelines in code assignment. (Prerequisites: None. Other Requirements: College-level reading and writing skills: Appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

#### HIMC 2010 ICD-10-CM Coding

4 credits: 2 hours lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course will introduce the student to the ICD-10-CM classification system with an emphasis on the correct process of utilizing the alphabetic index and tabular list for code assignment. The focus will be on rules, conventions, instructions of ICD-10-CM as well as the chapter specific guidelines (e.g. circulatory, injury, pregnancy), including criteria for assignment of principal and additional diagnoses in all applicable patient settings will be addressed. The impact of proper code assignment, MS-DRGs and reimbursement will also be discussed. (Prerequisites: BIOL 1107, HCOP 1620, HIMC 2600. Other Requirements: College-level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

#### HIMC 2015 ICD-10-CM/PCS Coding

4 credits: 2 hours lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course will introduce the student to the ICD-10-CM classification system and ICD-10-PCS inpatient procedural coding system. Emphasis will be placed on the correct process of utilizing the alphabetic index and tabular list for code assignment. The focus will be on rules, conventions, instructions of ICD-10-CM as well as the chapter specific guidelines (e.g. circulatory, injury, pregnancy), including criteria for assignment of principal and additional diagnoses in all applicable patient settings will be addressed. The impact of proper code assignment, MS-DRGs and reimbursement will also be discussed. (Prerequisites: BIOL 1107, HCOP/BTEC 1620, HIMC 2600. Other Requirements: College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

#### HIMC 2020 ICD-10-PCS Coding

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course focuses on the ICD-10-PCS classification system. The course will introduce the student to the professional standards for coding and reporting of inpatient procedure services. Coding characteristics, conventions and guidelines will be applied in identifying and accurately assigning codes to procedures. Health records, manual and computerized coding methods, and coding references will be utilized in the coding process. (Prerequisites: BIOL 1107, HCOP/BTEC 1620, HIMC 2600. Other Requirements: College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

### HIMC 2030 Advanced Coding

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

Students will continue using the principles of ICD-10-CM, ICD-10-PCS, and CPT/HCPCS coding to ensure proficiency in coding using patient records and advanced concepts of coding. Students will adhere to current regulations and established guidelines in code assignment. Students will use electronic applications and work processes to support clinical classification and coding. (Prerequisites: HIMC 1820, HIMC 2010 and HIMC 2020. Other Requirements: College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

### HIMC 2110 Cancer Registry Organization and Management

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides an introduction to cancer registry organization and management. Emphasis is placed on the basic knowledge of the types and purpose of cancer registries, quality control activities, accreditation, standard-setting organizations, as well as the legal and ethical issues surrounding a cancer registry. (Prerequisites: None).

### HIMC 2115 Cancer Registry Operations

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides an in-depth picture of the systematic processes used in the daily operations of a cancer registry. These processes include identification of cases, coding, maintaining quality, as well as lifetime follow-up and the role these elements plays in providing data for analysis. The focus will be on case eligibility requirements for state and national standards as well as the voluntary standards for accredited cancer programs of the American College of Surgeons Commission on Cancer (CoC). The importance of cancer committees, cancer conferences and quality monitoring will be reviewed. (Prerequisites: None).

### HIMC 2120 Cancer Disease, Coding and Staging

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course defines cancer and describes how it develops and spreads. Students will learn about the many types of cancer and how to classify these tumors utilizing globally recognized codes. Instruction on the different references which are used to assign codes for topography, morphology, extent of disease, and staging systems will be explored. Upon completion, students will be able to record, code, and stage site-specific cancer information using manual and computerized applications. An overview of historical staging systems will be included as a reference for students. (Prerequisites: HIMC 2110, HIMC 2115).

### HIMC 2125 Oncology Treatment and Coding

4 credits: 2 hours lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course covers oncology treatment and coding including an overview of nomenclature and classification systems. Importance is placed on major sites of cancer, diagnostic and staging procedures, treatment modalities, clinical trial and research protocols. American Joint Committee on Cancer (AJCC) staging, SEER summary staging, and extent of disease concepts used by physicians and cancer surveillance organizations to determine treatment and survival will be emphasized. (Prerequisite: HIMC 2120).

### HIMC 2130 Abstracting Methods

4 credits: 1 hour lecture/week - 6 hours lab/week - [Common Course Outline](#)

This course is designed to introduce and apply the principles of cancer registry abstracting. Identification and selection of appropriate clinical information from medical records in a manner consistent with cancer registration regulator core data requirements will be emphasized. Upon completion, student should be able to record, code, and stage site-specific cancer information as well as perform quality control edits to abstracted information to assure timeliness, completeness, and accuracy of data. (Prerequisite: HIMC 2125).

### HIMC 2135 Follow-up, Data Quality and Utilization

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course introduces cancer patient follow-up methodology and processes used to obtain follow-up cancer information regarding disease status, recurrence information, subsequent treatment, and development of subsequent primary cancers. The use of follow-up information within the cancer registry and healthcare organization is also reviewed. An introduction to cancer statistics with an emphasis placed on descriptive and analytic epidemiology, cancer surveillance, annual report preparation, and usefulness of statistical cancer data in a healthcare organization will be reviewed. Upon completion, students should be able to demonstrate an understanding of physician and other follow-up resources and activities. (Prerequisites: HIMC 2110, HIMC 2115, HIMC 2120).

### HIMC 2140 Professional Practice/Clinical Practicum

4 credits: 10 hours lab/week - [Common Course Outline](#)

This course provides clinical experience in all aspects of cancer registry organization and operation. Experience will include but not be limited to all facets of casefinding, coding and abstracting of cancer data, data collection, follow-up processes, and quality assurance activities. Practicum activities can be completed in three ways: on-site, virtual or hybrid (in-person and virtual components). Practicum activities will focus on developing skills in the five core competencies of major content areas. Upon completion, students should be able to apply cancer information management theory to cancer registry practices and standards. Students have the status of learner and shall not be considered agency employees, nor do they replace employed staff. Clinical practice is conducted as a non-paid laboratory experience under the direct supervision of an oncology data specialist. (Prerequisites: HIMC 2130 and HIMC 2135.)



### HIMC 2600 Human Diseases for Health Professionals

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course develops an understanding of the clinical knowledge base covering various areas of medical practice, provides fundamental information about normal body function, major disease conditions affecting all the major body systems and medications commonly used for those diseases. Focus will be to enhance professional communication within the health care environment by being able to associate basic treatment terminology and procedures with common disease conditions and the body system involved. (Prerequisites: None. Other Requirements: College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

### HIMC 2610 Pharmacology

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course covers the various medications commonly used. Additional topics covered will be drug classifications, modes of administration, and characteristics of typical drugs. Correct spelling and proper interpretation of medications in dictated material will be emphasized. (Prerequisites: None. Other Requirements: College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

### HIMC 2710 Healthcare Data Analysis

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a study of collecting, analyzing, interpreting, and presenting numerical data relating to health care services. The electronic patient record requires the health information management professional to apply computer software using spreadsheet, database, and presentational software to convey healthcare information to stakeholders. (Prerequisites: AOP 2350/BTEC 2355. Other Requirements: College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

### HIMC 2720 Quality Management of Health Information

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course covers the components of quality performance improvement for problem-solving, decision making, time management, and implementation of quality concepts. (Prerequisites: AOP 2350 or BTEC 2355. Other requirements: College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

### HIMC 2820 Supervision of Health Information

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a study of the basic principles of management, communication, and relationships in creating a productive work environment in a health care facility.

Effectiveness in dealing with co-workers, patients, and health care providers is also studied.

(Prerequisites: None. Other Requirements: College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better).

### HIMC 2830 Health Information Technology Review

1 credits: 2 hours lab/week - [Common Course Outline](#)

This course is the online capstone study and review for the Registered Health Information Technician (RHIT) national examination by the American Health Information Management Association (AHIMA). This course offers you a study plan, review of all major examination and domain topics, mock pretest and post-test, guidance to good computer test-taking skills, and a discussion board/chat room for discussion of questions with classmates. Student should be in the last semester of study in the Health Information Technology (HIT) program. (Prerequisites: None).

### HIMC 2835 CCA/CPC Review

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course is the online capstone study and review for the certified coding associate (CCA) and the certified professional coder (CPC) national examinations by the American Health Information Management Association (AHIMA) and the AAPC (formerly known as the American Academy of Professional Coders). This course offers you a study plan, review of all major examination topics, mock pretest and post-test, guidance to good computer test-taking skills, and a discussion board/chat room for discussion of questions with classmates. Student should be in the last semester of study for the Coding Specialist Diploma. (Prerequisites: HIMC 1820, HIMC 2010, and HIMC 2020).

### HIMC 2870 HIT Capstone Experience

2 credits: 4 hours lab/week - [Common Course Outline](#)

This course provides the student with practical application of theories learned during the course of study. Under the supervision of a qualified health information professional, the student will gain professional practice experience. Students will be required to meet written goals and objectives and undergo evaluations. Student should be in their last semester of study in the Health Information Technology (HIT) program. (Prerequisites: None).

## HISTORY

### HIST 1613 Western Civilization I: Ancient Times to 1715 (MnTC 05, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

The course begins in Mesopotamia and focuses on Western Civilizations developments until the death of Louis XIV. It covers the Ancient Middle East, Greece and Rome, the Medieval Period, the Renaissance, the Reformation, the Age of Exploration, and the growth of absolutism and constitutional monarchies. College level reading and writing are recommended. (Prerequisites: None).

### HIST 1614 Western Civilization II: The Modern Age 1715-Present (MnTC 05, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course traces the history of Europe from the Scientific Revolution to the present. It will include an analysis of the Enlightenment, the French Revolution, Napoleonic Era and Age of Ideology. In addition, it will deal with causes and results of World Wars I and II, the Cold War, and the disintegration of the Eastern Bloc. College level reading and writing are recommended. (Prerequisites: None).

### HIST 1617 World History to 1500 (MnTC 05, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides a survey of world history from the beginnings of civilization about 3500 BCE to 1500 CE. A brief summary of prehistoric societies and lifestyles precedes discussion of early literate societies in Egypt, Mesopotamia, China, and India. The development of world religions, intellectual pursuits, and cultural outputs among societies are also discussed. The course concludes with an examination of societies, nations, and empires, in Africa, Asia, Europe, Oceania, and the Americas. Cross-cultural interactions are emphasized throughout the course. College level reading and writing are recommended. (Prerequisites: None).

### HIST 1618 World History Since 1500 (MnTC 05, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will be a global overview of the modern period of world history. It begins in 1500, with a comparison of different civilizations around the globe. It discusses colonialism, changes in religious patterns, the French Revolution, the industrial revolution, nationalism, and ideologies of the 19th century. In the 20th Century the focus will be the World Wars, disintegration of colonial empires, the Cold War, and globalization. The course will end with a brief review of contemporary conditions. Cross-cultural interactions are emphasized throughout the course. College level reading and writing are recommended. (Prerequisites: None).

**HIST 1622 Minnesota History (MnTC 05, 10)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers Minnesota's history from the paleo cultures, the pre-European Amerindian cultures, the French and British exploration and fur trade and pre-statehood. It also includes a discussion of the Dakota Conflict, Minnesota's climatic, geo-physical, socio-economic, political, and cultural development. (Prerequisites: None).

**HIST 1624 U.S. History to 1865 (MnTC 05, 07)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

European colonization, and the various battles for continental supremacy follows. The American War for Independence, the construction of the new nation, and the era of Jacksonian Democracy make up the third portion of the course. Finally, the topics of territorial expansion, immigration, slavery, and the Civil War's causes and results round out the course. College level reading and writing are recommended. (Prerequisite: None).

**HIST 1625 U.S. History 1865-Present (MnTC 05, 07)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Beginning with the period of Reconstruction, the course encompasses the Gilded Age, rapid industrialization, the Progressive reform era, World War I, the 1920s, and the Great Depression. The second half of the course concerns itself with World War II, the Cold War, United States containment policies, the turbulence of the 1960s, as well as events of the 1970s, through the present day. In covering these topics, the course will dwell on the major events and participants that made these historical epochs. College level reading and writing are recommended. (Prerequisites: None).

**HIST 1789 History of the American Presidency (MnTC 05, 09)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will trace the development of the American Presidency including Constitutional and implied powers. It will take a historical approach to the development of the office by focusing on critical presidents, events, crises, decisions, and legacy. The power of the presidency has grown, especially in the 20th century, and therefore the course will devote a considerable amount of attention on that era. (Prerequisites: None).

**HIST 2070 History of the Rock and Roll Era (MnTC 05, 07)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

The History of the Rock and Roll Era covers American history and the political, social, cultural, and economic changes occurring after World War II using Rock and Roll as the lens through which to examine those changes. It will address major historical events and significant rock artists and styles of music that reflect historical movements. (Prerequisites: None).

## HEALTH

### HLTH 1102 Industrial Safety and First Aid

2 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to cover different safety aspects in industry. Topics discussed include; safety engineering, industrial hygiene, life safety and the importance of the Occupational Safety and Health Act (OSHA) and the Right to Know Act. The course uses a variety of formats; lectures, video scenarios, demonstrations, and practice in industrial safety practices and emergency first aid care. An American Red Cross CPR/AED and Standard First Aid Certificate is awarded after successful completion of the course, successful completion of all American Red Cross criteria and payment of the testing fee. (Prerequisites: None).

### HLTH 1108 Weight Management Through Nutrition and Fitness

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course explores weight management without dieting as a negative aspect, but instead a positive behavior for optimal nutrition, and the implementation of exercise as a lifestyle choice. It is designed for students to acquire the basic principles for understanding proper nutrition and fitness principles, by utilizing behavioral analysis and application of personal results, to develop and implement individualized weight management plans. (Prerequisites: None).

### HLTH 1109 Community CPR/First Aid and Safety

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course prepares the student to recognize an emergency, implement an emergency action plan, provide basic emergency care, and learn methods of preventing injuries and emergencies. Skill assessment will be included for the following: assessing a victim; breathing emergencies; obstructed airway techniques; CPR techniques for conscious and unconscious adults, children, and infants; control of bleeding; treating shock; and applying splints and slings. Upon successful completion of the American Red Cross Community First Aid & Safety criteria, and testing fee payment, students successfully completing this course will receive the appropriate certificates from the American Red Cross. (Prerequisites: None).

### HLTH 1110 CPR/AED for the Professional Rescuer-Health Care Provider

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course will provide the professional rescuer with the knowledge and skills necessary to help sustain life and minimize the consequences of respiratory and cardiac emergencies until more advanced medical personnel arrive. Specific skills addressed through lecture, demonstration, video, scenarios, discussion, and practice include adult/child/infant CPR, two-rescuer procedures, and AED training. The course includes certification in American Red Cross-CPR/AED for the Professional Rescuer. After successfully completing all components of the class, students may receive the American Red Cross certification. A fee is required for certification. (Prerequisites: None).

#### HLTH 1111 Health Education

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course allows students to explore and assess how a number of major health concepts influence their lives. The class includes a study of stress, mental health, human sexuality, nutrition and fitness, drugs, disease, aging, death and dying, consumerism and health care, and ecology, violence and safety. This course is designed to help the individual student understand and cope with their environment and to be a responsible citizen. (Prerequisites: None).

#### HLTH 1114 Responding to Emergencies

3 credits: 2 hours lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to prepare students to respond appropriately and with confidence in an emergency situation until more advanced help arrives. Instruction will include discussion, lecture, demonstration, video scenarios and practice. The course includes certification in American Red Cross - Responding to Emergencies CPR/AED and First Aid. After successfully completing all components of the class, students may receive the American Red Cross certification. A fee is required for certification. (Prerequisites: None).

#### HLTH 1132 Drug Use and Abuse

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course allows students to explore many of the historical and current patterns associated with the use of drugs in our society and other cultures and societies of the world. Students will examine their attitudes, values, and assumptions concerning drug use. Discussions will include the social, legal, medical, psychological, and rehabilitative aspects of drug use. (Prerequisites: None).

#### HLTH 1135 Holistic Health: Introduction to Complementary Health

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This introductory course to holistic health allows students to explore complementary/alternative therapies such as acupuncture, chiropractic, herbal remedies, homeopathy, aromatherapy and biomagnetic therapy. Discussions will include the social, political and economic aspects of holistic health care, and the healing aspects of humor, exercise and nutrition. Updated research and the insurance industries views on alternative therapies will also be discussed. (Prerequisites: None).

#### HLTH 1155 Stress Management

2 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to lead students through techniques for time and stress management. Helping students identify how to manage their time, responsibilities and applying positive coping mechanisms is key to quality in day-to-day living and lowering negative stress. Topics to be explored are health implications to negative stress, and application of positive coping strategies such as, but not limited to meditation, progressive muscle relaxation, breathing techniques, journaling, exercise, and nutrition. (Prerequisites: None).

## HLTH 2126 Women's Health Issues

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course examines lifestyle choices dealing with many aspects of overall health prevention and promotion. This course will identify major health issues confronting women today, by exploring issues from the traditional medical model to the holistic model using an integrative approach to wellness. This course will include an overview of critical contemporary women's health topics such as exercise, nutrition, stress management, pregnancy, labor and childbirth, menopause, heart disease, self-esteem, domestic violence, and other issues as they affect today's women. (Prerequisites: None).

## HONORS

### HONR 2900 Honors Capstone

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course is designed as the final honors experience for students enrolled in the Liberal Arts: Honors AA. Students will work collaboratively with one another and the instructor to synthesize previous honors coursework using an individually selected Phi Theta Kappa Honors Study Topic theme. Students will design a capstone project that meaningfully connects a significant portion of their previous honors coursework. The course will culminate with students presenting their projects to their peers. (Prerequisite: INFS 1915).

## HORTICULTURE

### HORT 1318 Introduction to Turfgrass Management

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

The management of high quality turf requires specialized skills. A thorough understanding of turfgrass morphology, environmental adaptation, and cultural requirements are important tools in the management of turfgrass. In this course, an integration of turf maintenance theory and practice will be applied to home lawns and recreational landscapes. (Prerequisites: None).

## HUMAN SERVICES TECHNICIAN

### HS 1522 Introduction to Human Services

3 credits: 3 hours lecture/week - [Common Course Outline](#)

In this course, students explore the duties of human services professionals and the ethical values underpinning their work. They are introduced to various human services agencies and delve into the historical evolution of social welfare systems. Present employment trends and the varied backgrounds of client populations are discussed. A central component of the course is a community-based service learning project. (Prerequisites: None).

### HS 1535 Psychosocial Aspects of Chronic Illness and Disability

3 credits: 3 hours lecture/week – [Common Course Outline](#)

The course explores concepts of chronic illness and disability within the context of psychological and social impacts. Emphasis will be on chronic health conditions as an experience to be optimized for functional capacity and the role of helping professionals supporting persons with chronic illness and disability. (Prerequisites: None).

### HS 1550 Mental Health Theory

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides an overview of mental health disorders and the theoretical perspectives of mental health and mental illness. The role of the human services professional in the mental health field will be emphasized. (Prerequisites: None).

### HS 1560 Chemical Health Theory

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides an overview of chemical health, the addiction process, and the effects of addiction on individuals, families, and communities. The causal theories, methods of treatment, and recovery process are presented to provide students with working knowledge of the addiction field. (Prerequisites: None).

### HS 1585 Human Services Field Experience

3 credits: 120 hours/semester – [Common Course Outline](#)

This course provides a student with 120 hours of practical field experience within a human service agency. This experiential learning consisting of engagement within a social service setting. (Prerequisites: HS 1522).



### HS 1710 Foundations of Alcohol and Drug Counseling

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides students with an introduction to the practice of substance use counseling by familiarizing them with basic substance use counseling theory, skills, and terminology. This course introduces students to the 12-core functions of an alcohol and drug counselor, treatment modalities, co-occurring disorders, and special populations in the counseling field. Physical, psychological, pharmacological, environmental, and social aspects of substance use disorders will also be discussed. Lastly, this course will discuss ethics, licensure requirements, background studies, and practicum placement. (Prerequisites: ENGL 1117).

### HS 1720 Co-Occurring Disorders

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides students with a basic understanding of substance use and mental health disorders, across the lifespan, as described in the current Diagnostic and Statistical Manual of Mental Disorders (DSM). This course describes the impact of these disorders on self and others. Differential diagnosis and co-occurring interaction of these disorders with other substance use and mental health disorders will also be discussed. (Prerequisites: ENGL 1117).

### HS 1730 Screening and Assessment of Disorders

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course examines screening and assessment tools used by counselors in the substance use field. A major emphasis of this class will be on the practical application of comprehensive assessment and the use of the American Society of Addiction Medicine (ASAM) risk and placement criteria. In addition, students will learn about mental health assessment and screening tools, and their co-occurring relationship with substance use disorders. Motivational interviewing, intake, orientation, service coordination (referral), case management, crisis intervention, client education, ethics, multicultural issues, DSM diagnosis, and treatment planning will also be discussed. (Prerequisites: ENGL 1117).

### HS 1740 Pharmacology of Addiction

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course provides students with an introduction to psycho-pharmacological aspects of addiction by evaluating prime effects and side-effects of mood-altering drugs. This course will discuss drug categories, routes of administration, incidence, prevalence, mechanisms of actions, and treatment approaches. Physical, social, and psychological effects of drugs are also addressed. (Prerequisites: ENGL 1117).

### HS 1750 Case Management and Ethics

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course details the ethical and legal guidelines that direct the delivery of alcohol and drug counseling services at a state and national level. In addition, students will compare and contrast LADC guidelines, statues, POFS, and regulations with National Association for Alcoholism and Drug Abuse Counselors (NAADAC), American Psychological Association (APA), National Association of Social Workers (NASW), American Association of Marriage and Family Therapists (AAMFT), and American Counseling Association (ACA) standards. Finally, case management strategies will be evaluated. (Prerequisites: ENGL 1117).

### HS 1760 Multicultural Aspects of Addiction

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on developing multicultural awareness and competency as it relates to counseling clients from diverse backgrounds. This course provides students with a general overview of many cultures and subcultures by understanding their history, geographic origin, identity, beliefs, norms, language, and support systems. This course also provides an overview of the counseling skills and techniques necessary to interact with a variety of cultural backgrounds in the addiction counseling field. Emphasis will be placed on the unique treatment needs of individuals from diverse populations and the implementation of consultation and referral when necessary. (Prerequisites: ENGL 1117).

### HS 1765 Counseling Theory and Practice

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces students to a wide variety of individual, group, crisis, and system counseling theories. This course also highlights how these theories view community resources, treatment planning, assessment, goal setting, diagnosis, case management, and client education. Lastly, this course provides students with the opportunity to practice these theories, interventions, techniques, and skills in simulated role plays. (Prerequisites: ENGL 1117).

### HS 1770 Alcohol and Drug Counseling Practicum I

3 credits: 3 hours lab/week - [Common Course Outline](#)

Students in Practicum I will demonstrate their mastery of academic coursework in the 12- core functions of an alcohol and drug counselor, while completing a minimum of 440 hours of clinical practice under the supervision of a Licensed Alcohol and Drug Counselor, or other qualified professional. During regularly scheduled seminar meetings students will discuss ethical and professional considerations, boundary setting, interpersonal conflicts, and their engagement in the therapeutic process. Furthermore, students will share with one another their practicum experiences, challenges, successes, areas for improvement, and progress in the twelve core functions. (Prerequisites: HS 1710 and HS 1750).

### HS 1780 Alcohol and Drug Counseling Practicum II

3 credits: 3 hours lab/week - [Common Course Outline](#)

Students in practicum II will demonstrate their mastery of academic coursework in the 12-core functions of an alcohol and drug counselor, while completing a minimum of 440 hours of clinical practice under the supervision of a Licensed Alcohol and Drug Counselor, or other qualified professional. During regularly scheduled seminar meetings students will discuss ethical and professional considerations, boundary setting, interpersonal conflicts, and their engagement in the therapeutic process. Furthermore, students will share with one another their practicum experiences, challenges, successes, areas for improvement, and progress in the twelve core functions. Admission to the RCTC Alcohol and Drug Counseling Program or Certificate. (Prerequisites: HS 1770).

### HS 1781 Crisis Intervention and Prevention

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides students with an overview of crisis intervention theories as it relates to the behavioral health and education professions. Preventative techniques, strategies, and models will be explored. Risk assessment, community plans of action, supportive resources, and crisis specific situations will also be discussed. College level reading and writing is needed for this class. (Prerequisites: None).

### HS 1782 Addiction, Society, and the Justice Systems

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course looks at the connections, dynamics, and influences of addiction, mental health, and the criminal justice system on society. This course will also explore criminal justice and counseling theories as they relate to crime, recidivism, recovery, and diseases such as addiction or mental health. Lastly, this class will look at how culture, community resources, and state or federal POFS effect these topics. College level reading and writing is needed for this class. (Prerequisites: None).

### HS 1783 At-Risk Children, Youth, and their Families

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course explores biological, psychological, social, ecological, and cultural issues impacting at risk children, youth, and their families. This course also explores human development and counseling theories as it relates to resiliency, peer influence, poverty, mental illness, addiction, disabilities, academic success, and transition to adulthood. Lastly, this course looks at risk/protective factors, resources, prevention strategies, and therapy options for this population. College level reading and writing is needed for this class. (Prerequisites: None).

### HS 1785 Overview of Applied Behavioral Analysis

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course will focus on the analysis and application of concepts, methods and principles of behavioral therapy and its relationship to a variety of professions in the behavioral field. (Prerequisites: ENGL 1117).

### HS 1787 Aging Issues in Human Services

3 credits: 3 hours lecture/week - [Common Course Outline](#)

The course provides an overview of the biological, psychological, and social perspectives of the aging process and introduces students to the human services agencies that support older adults. Focus will be on the impact that societal aging is having on the social service delivery system. (Prerequisites: None).

### HS 1789 Culturally Responsive Helping Skills

3 credits: 3 hours lecture/week – [Common Course Outline](#)

The course outlines the critical elements of culturally responsive helping skills, including humility, empathy, personal bias, multicultural aptitude, and the models of identity and cultural competence. The content will focus on the intersectionality of how clients and helpers experience power, privilege, and oppression, and the effect on the therapeutic relationship. (Prerequisites: None).

## HUMANITIES

### HUM 1001 Introduction to Hispanic Cultures (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a comparative study of Hispanic cultures and societies exploring geographical, historical, socio- economic, political, and religious issues, as well as the regional customs and interpersonal relations of the Hispanic world. Because these courses are taught in English (may include basic Spanish expressions), they are particularly suitable for students who have never studied a foreign language. (Prerequisites: None).

### HUM 1111 Western Humanities I: Antiquity to 1616 (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers the history of Western humanities including visual art, music, theater, literature, religion, and philosophy from around 1000 BCE until the death of Shakespeare in 1616. Works may be drawn from the ancient Near East, classical Greece and Roman, and the European Middle Ages and Renaissance. The course may also introduce students to selected works from non-Western cultures as a point of comparison. (Prerequisites: None).

HUM 1112 Western Humanities II: 1617 to the Present (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers the history of Western humanities including visual art, music, theater, literature, religion, and philosophy from 1617 to the present. While the focus will be on authors and artists from Western Europe, the Americas, and Australia, the course may also include selected works from non-Western cultures as a point of comparison. Note: Students do not need to take HUM 1111: Western Humanities I in order to take this class. (Prerequisites: None).

HUM 1131 Introduction to the Humanities (MnTC 06)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introduction to the methods, techniques, and scope of the study of the humanities, surveying a range of artistic forms with an emphasis on the relationship between form and meaning as well as on the development of each person's critical and analytical skills for interpretation of those forms. Recommended: College level reading and writing. (Prerequisites: None).

HUM 1190 Native American Studies (MnTC 06, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course explores Native American life from diverse cultural and academic perspectives in both historical and contemporary terms. Students will learn about aspects of tribal life and history such as philosophy, spirituality, arts and literature, sovereignty, political life, education, and community. (Prerequisites: None. Other Requirements: College-level reading and writing).

HUM 1200 Artistic Responses to Social Issues (MnTC 06, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to help increase an understanding of how Fine Arts (which may include creative writing, and the performing and visual arts) reflect and can impact current events relating to human rights, diversity, anti-racism and intersectionality, and other social issues. Students will drive the focus of the course through their research and group collaboration. Students will research historical and contemporary issues as a foundation to working together to develop arts-based group and/or individual projects as statements to encourage societal awareness, impact, and reconciliation. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: College level reading and writing recommended. (Prerequisites: None).

HUM 1500 Compassion Studies (MnTC 06, 09)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course explores ideas about compassion and the "good life" as they are expressed through literature, art, music, religion, philosophy, and/or other modes of humanistic inquiry. Students will reflect on questions such as the following: What is compassion? Do humans have a duty to be compassionate? Why does compassion matter? Readings, discussions, videos, and lectures will be drawn from diverse approaches, time periods, and academic disciplines. College-level reading and writing skills are required. (Prerequisites: None).

#### HUM 1600 Civility (MnTC 06, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will provide students with a comprehensive understanding of civility within diverse professional, social, and personal settings through the exploration of works in the humanities and fine arts, including various contemporary media. Students will develop their communication skills and their understanding of behavior, respect, and tolerance in relationships and diverse social systems. College-level reading and writing required. (Prerequisites: None).

#### HUM 1841 Studies in Leadership (MnTC 06, 09)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is designed to provide emerging and existing leaders the opportunity to explore the concept of leadership and to develop and improve their leadership skills. Students will explore leadership theories and group dynamics while developing a personal leadership philosophy and an awareness of the moral and ethical responsibilities of leadership. Students will develop an awareness of one's own ability and style of leadership while practicing leadership skills. (Prerequisites: None).

#### HUM 2121 Women's Issues Around the World (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on contemporary topics and social justice issues that affect women domestically and/or globally. Possible course topics include female circumcision, human trafficking, domestic violence, reproductive control, maternity care, immigration, honor killings, plastic surgery, sexual health, access to education, and other current issues that impact the lives of women. Students will explore such social, political, and cultural issues through the lenses of the humanities and the efforts of organizations and communities, locally and globally, to improve women's lives. (Prerequisites: None).

#### HUM 2255 Shakespeare: Screen, Stage, and Page (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

In this course, students will read, watch, discuss, and analyze some of Shakespeare's major works, such as comedies, histories, tragedies, romances, and poetry. The course will deal with the historical Elizabethan context in which these works were created and the impact that these works have had on later plays, films, poetry, and popular culture. This course will also emphasize the aesthetic value of Shakespeare's work and how this value creates a continuing influence in literature, drama, and cinema. College level reading and writing skills recommended. (Prerequisites: None).

## INFORMATION STUDIES

### INFS 2915 Introduction to Information Literacy: Honors (MnTC 01)

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course is an advanced introduction to the organization, retrieval, and critical evaluation of information from print, electronic, and other non-print sources. One of Phi Theta Kappa's Honors Study Topic themes will unite traditional information literacy topics across the course. Students will learn how information is organized, the concepts of the information research process, and how to formulate effective search strategies. Students will critically evaluate information and use it ethically. Additionally, students will learn to apply the skills and concepts learned from this course to any research assignments, laying a foundation for academic success and lifelong learning. (Prerequisites: None).

## MATHEMATICS

### MATH 0093 Pre-Algebra

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is for the student whose placement test score indicates the need for a review of fractions, decimals, ratios, proportions, percent, signed numbers, polynomials/like terms, and solving basic linear equations in one variable before beginning elementary algebra. Calculator use is NOT allowed for the required content. (Pre-requisites: None. Other Requirements: See Placement guide for Math and Reading requirements).

### MATH 0094 Elementary Algebra with Arithmetic Review

5 credits: 5 hours lecture/week - [Common Course Outline](#)

This course is for the student whose placement score indicates that a review of integers, fractions, decimals and percent is needed before progressing to fundamental algebra skills and problem-solving techniques needed solve multi-step algebraic problems within the set of real numbers. The algebraic fundamentals include working with algebraic expressions, polynomials, linear inequalities in one variable, and linear equations in one and two variables. The successful completion of this course prepares the student for Intermediate Algebra or Contemporary Concepts in Mathematics. Reading skills as demonstrated by completion of READ 0800 or equivalent placement score. (Prerequisites: MATH 0093).

### MATH 0098 Elementary Algebra

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is designed to develop the fundamental algebra skills and problem-solving techniques needed to solve multi-step algebraic problems within the set of real numbers. The algebraic fundamentals include working with algebraic expressions, polynomials, linear inequalities in one variable, and linear equations in one and two variables. The successful completion of this course prepares the student for Intermediate Algebra or Contemporary Concepts in Mathematics. Successful completion of prerequisite course with a grade of C or higher. Reading skills as demonstrated by completion of READ 0800 or equivalent placement score. (Prerequisites: MATH 0093).

### MATH 0099 Intermediate Algebra

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course expands techniques, skills, and applications from the set of rational numbers to the set of real numbers. It includes radicals, quadratic equations and inequalities, systems of linear equations in three variables, functions, and an introduction to conics. Successful completion of this course prepares the student for entry-level college mathematics courses. (Prerequisites: MATH 0094 or MATH 0098. Other Requirements: See placement guide for Math and Reading requirements).

### MATH 0100 Combined Elementary and Intermediate Algebra

5 credits: 5 hours lecture/week - [Common Course Outline](#)

This course presents both Elementary and Intermediate Algebra in one semester. It includes the fundamentals of algebra, algebraic expressions, polynomials (including factoring), linear and quadratic equations (in one and two variables), rational expressions and equations, exponents, radicals, linear and quadratic inequalities (one and two variables), systems of linear equations (two and three variables), functions, and an introduction to conic sections. Successful completion of this course prepares the student for entry-level college mathematics courses. Students enrolling in this course must have a good background in pre-algebra (successful completion of MATH 0093 with a grade of A is recommended) and must be prepared to devote sufficient time and effort to complete the standard two-course sequence in one term. Restriction: Credit will not be granted for both Math 0100 and Math 0098/Math 0099 series. (Prerequisites: MATH 0093. Other Requirements: See placement guide for Math and Reading requirements).

### MATH 0911 Foundations of Quantitative Reasoning

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to be taken concurrently with Math 1111 Quantitative Reasoning. The course focuses on concepts, operations, and models involved with to prepare for Quantitative Reasoning topics. (Prerequisites: MATH 0093; READ 0900. Other Requirements: Must be taken concurrently with MATH 1111 and prerequisites may be satisfied by equivalent Math and/or Reading placement scores).



**MATH 0915 Foundations of College Algebra**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to be taken concurrently with Math 1115 College Algebra. The course focuses on concepts, operations, and models involved with radicals, quadratic equations and inequalities, systems of equations and functions to prepare for College Algebra topics. (Prerequisites: MATH 0094 or MATH 0098; READ 0900. Other Requirements: Must be taken concurrently with MATH 1115 and prerequisites may be satisfied by equivalent Math and/or Reading placement scores).

**MATH 0990 Statway Statistics I**

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This is the first course of a two-semester series of courses for students. Concepts and methods of statistics with an emphasis on data analysis will be presented. Developmental mathematics concepts that serve as a foundation for statistical analysis are integrated into the course. Included in the series are: methods for collecting data, graphical and numerical descriptive statistics, correlation, linear regression, basic concepts of probability, confidence intervals and hypothesis tests for means and proportions, and chi-square tests. These courses are expected to be completed in consecutive semesters. Reading skills as demonstrated by completion of READ 0800 or equivalent placement score. (Prerequisites: MATH 0093).

**MATH 1015 Applied Technical Math**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course covers a review of basic arithmetic skills, fractions, decimals, and percent. It covers ratio/proportion, geometry, measurement (conversions), basic algebraic expressions, linear equations, and basic right triangle trigonometry. Emphasis is on problem solving with specific application packets designed to interface with the student's core program. Cooperative learning activities and technology are used to support learning. (Prerequisites: None).

**MATH 1016 Technical Math Essentials**

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course covers ratio/proportion, applied geometry, and basic right triangle trigonometry to support technical programs. In addition to lectures, cooperative learning is used to support student learning. Students use scientific calculators throughout the program areas. Emphasis is on problem solving with program specific application packets designed to interface course. (Prerequisites: MATH 0093. Prerequisite may be satisfied by equivalent Mathematics placement score).

**MATH 1026 Mathematics for Veterinary Technicians**

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course covers ratios and proportions, English and Metric measurement systems and dimensional analysis. Emphasis is on problem solving with application packets designed to interface with the student's core program. Cooperative learning activities are used to support learning course. (Prerequisites: MATH 0093. Prerequisite may be satisfied by equivalent Mathematics placement score).

**MATH 1050 Foundations of Mathematics: Algebra Emphasis (MnTC 04)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is one of two general education mathematics courses focusing on concepts, operations, and models involved with numeration systems, sets, whole numbers, decimals, integers, rational numbers, real numbers, equations, and functions, with emphasis on estimation problem solving, and mathematical reasoning. Active and cooperative learning are also emphasized with use of manipulative or E-manipulatives and computer technology incorporated throughout the course. (Prerequisites: MATH 0094 or MATH 0098 or MATH 0990; and READ 0900).

**MATH 1060 Foundations of Mathematics: Geometry Emphasis (MnTC 04)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is one of two general education mathematics courses focusing on concepts and models involved with probability, statistics, geometry, and measurement, with emphasis on estimation, problem solving, and mathematical reasoning. Active and cooperative learning, E-manipulatives, and computer technology are incorporated throughout the course. (Prerequisites: MATH 0094 or MATH 0098 or MATH 0990; READ 0900 Other Requirements: Prerequisites may be satisfied by equivalent Math and/or Reading placement scores).

**MATH 1090 Statway Statistics II (MnTC 04)**

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is the second course of a two-semester series of courses for students. Concepts and methods of statistics with an emphasis on data analysis will be presented.

Developmental mathematics concepts that serve as a foundation for statistical analysis are integrated into the course. Included in the series are: methods for collecting data; graphical and numerical descriptive statistics; correlation; linear regression; basic concepts of probability; confidence intervals and hypothesis tests for means and proportions; and chi-square tests. (Prerequisites: MATH 0990).

**MATH 1111 Quantitative Reasoning (MnTC 04)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a problem-solving based Liberal Arts course for the student who wishes to acquire a broad background in mathematics. The topics that will be presented are: Ratio and Proportions, Finance Mathematics, Probability, and Statistics. (Prerequisites: MATH 0094 or MATH 0098 or Concurrent Enrollment in MATH 0911; READ 0900. Other Requirements: Prerequisites may be satisfied by equivalent Math and/or Reading placement scores).

**MATH 1113 Finite Math With College Algebra (MnTC 04)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introductory course in mathematical modeling and decision making with emphasis on applications. College level reading skills as demonstrated by completion of READ 0900 or equivalent placement score. (Prerequisites: MATH 0099 or MATH 0100).

**MATH 1115 College Algebra (MnTC 04)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This is the first college level algebra course. Topics include but are not limited to: Polynomials, Rational, Exponential, and Logarithmic functions and their inverses, solving and graphing higher order equations, optimization applications, methods of solving systems of equations, and conic sections. (Prerequisites: MATH 0099 or MATH 0100 or Concurrent Enrollment in MATH 0915; READ 0900. Other Requirements: Prerequisites may be satisfied by equivalent Math and/or Reading placement scores).

**MATH 1117 Precalculus (MnTC 04)**

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This is a college level Math course. Topics include trigonometric functions and their inverses, trigonometric identities and equations, applications of trigonometry, conic sections, sequences, series, and a review of algebra topics as needed. College level reading skills as demonstrated by completion of READ 0900 or equivalent placement score. (Prerequisites: MATH 1115 or concurrent enrollment in MATH 1115 with instructor permission).

**MATH 1119 Applied Calculus (MnTC 04)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a college level introductory calculus course with an emphasis on applications. Topics include but are not limited to: limits, derivatives, continuity, first and second derivative test for relative extreme, applications of absolute max/min, integration, and continuous money flow. College level reading skills as demonstrated by completion of READ 0900 or equivalent placement score. (Prerequisites: MATH 1113 or MATH 1115 or MATH 1117).

**MATH 1127 Calculus I (MnTC 04)**

5 credits: 5 hours lecture/week - [Common Course Outline](#)

This first calculus course in the sequence include the following topics: limits; continuity; differentiability; applications of differentiation including related rates; optimization; linear approximation and Newton's Method; function sketching; integration with applications including area, volumes of rotation, and work; introduction to the calculus of inverse functions including exponential, logarithmic and trigonometric functions. College level reading skills as demonstrated by completion of READ 0900 or equivalent placement score. (Prerequisites: MATH 1117. An appropriate placement score is equivalent to the prerequisite. Successful completion of prerequisite course with a grade of C or higher).

**MATH 1128 Calculus II (MnTC 04)**

5 credits: 5 hours lecture/week - [Common Course Outline](#)

This course is a second semester calculus course including topics of: inverse functions (exponential, logarithmic, trigonometric, etc.), techniques of integration, applications including arc length, surface area, force, and centers of mass, parametric forms including polar forms, sequences and series including Taylor series. College level reading skills as demonstrated by completion of READ 0900 or equivalent placement score. (Prerequisites: MATH 1127).

**MATH 2208 Fundamentals of Statistics (MnTC 04)**

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is an introduction and overview of math statistics. Topics will include (but not limited to) descriptive statistics, probability and hypothesis testing. Computers and graphics calculators will be used extensively throughout the class in the classroom and computer lab setting. College level reading skills as demonstrated by completion of READ 0900 or equivalent placement score. (Prerequisites: MATH 0099 or MATH 0100 or MATH 1111).

**MATH 2218 Discrete Mathematics**

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This is a course for mathematics and/or computer science majors. Topics include sets, relations, symbolic language, graph theory, matrices, and Boolean algebra. College level reading skills as demonstrated by completion of READ 0900 or equivalent placement score. Successful completion of prerequisite courses with a grade of C or higher. (Prerequisites: MATH 1115).

**MATH 2237 Multivariable and Vector Calculus**

5 credits: 5 hours lecture/week - [Common Course Outline](#)

This course is first in a sequence which is a continuation of the first year of calculus. Topics are selected from the following: coordinate and vector geometry, vector valued functions, velocity-acceleration and curvature, cylindrical and spherical coordinate systems, partial differentiation and applications, double and triple integrals, Green's-Stokes' Divergence Theorems, and Frenet Formulas. (Prerequisites: MATH 1128).

**MATH 2238 Differential Equations and Linear Algebra**

5 credits: 5 hours lecture/week - [Common Course Outline](#)

This course is an in-depth look at topics such as ordinary differential equations, vector spaces, systems, linear transformations, and applications. (Prerequisites: MATH 1128).

### MATH 2350 Introduction to Mathematical Statistics

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is an introduction to mathematical statistics. Topics will include probability, discrete and continuous random variables, estimation, hypothesis testing, and regression analysis. Computers and graphics calculators will be used extensively throughout the class in the classroom and computer lab setting. College level reading skills as demonstrated by completion of READ 0900 or equivalent placement score. (Prerequisites: MATH 1119 or MATH 1127).

## MASS COMMUNICATIONS

### MCOM 1190 TV/Media Production

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Students will acquire video production skills including planning, scripting, shot sequencing, composition, editing, mastering, and distribution methods. This course will use video technology as a creative communication tool. Students will work with video equipment, computer-based editing, audio for video production, and lighting. (Prerequisites: None).

### MCOM 1245 Writing for Mass Media (MnTC 01)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will introduce students to writing copy for a range of mass media, including print and broadcast journalism, public relations, advertising, social media, and web publications. Students will learn to gather information and become proficient in conventions and style for publishing/broadcasting for each medium. (Prerequisites: None. Other Requirements: College level reading and writing).

### MCOM 2210 Introduction to Public Relations (MnTC 09)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a concentrated study of audience and objective analysis, the steps in planning a public relations campaign, writing print and broadcast releases, and the effective use of mass media to communicate. History and philosophy of public relations is covered as well as publicity for business and non-profit community organizations. (Prerequisites: None. Other Requirements: College level reading and writing).

## MCOM 2294 Mass Communication Internship

Credits and hours/week may vary. - [Common Course Outline](#)

This course provides the student with the opportunity to apply classroom skills in a professional work setting. Experience will be gained in assisting with and independently performing technical and organizational tasks in a mass communication setting. Category 1 classes may be taken twice for credit and may be taken additional times by auditing. This is a variable credit course. (Prerequisites: None).

## MUSIC

### MUSC 1001 Music Fundamentals (MnTC 06)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introductory course focusing on listening to music and the reading of music. Basic elements of sound will be covered and will include: Rhythm, Melody, Pitch, Form, Harmony, Timbre, Expression, Tempo, and Dynamics. The course will include a basic approach to the physics of sound, sound as an art, the philosophy of music and the language of music. The course is intended for the general student and can be used as a prerequisite into music theory. (Prerequisite: None).

### MUSC 1002 Music, Video, Lights I (MnTC 06)

3 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is an introductory exposure to the creative process using multiple media of music, video, and lights. Basic sound/video editing and creative design will be explored and coupled with creating synchronized compositions. Basic theatre lighting concept design and control will then be combined to develop synchronized multi-media composition presentations. The thematic creations are open to any style. Students will have access to labs and presentation spaces to create and perform their creations. (Prerequisites: None).

### MUSC 1003 Music, Video, Lights II

3 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a continuation of MUSC 1002: Music, Video, Lights I. This hands-on course will explore creativity by applying advanced music editing techniques, expanding knowledge of light fixture features and automation, storyboarding and capturing planned video shots using various cameras and video techniques, and introducing basic CGI video graphic design and effects. The class will focus on public performances of new media creations. (Prerequisites: MUSC 1002).

**MUSC 1005 Live Sound Production**

3 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course will focus on producing live music events and incorporating contemporary DJ and VJ technology. Basics of live sound setup and operations will be combined with theory, practice, creation, and presentation of visual integration of lights and video projection in music production events. (Prerequisite: None).

**MUSC 1101 Music Appreciation (MnTC 06)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will address the affective domain of music listening and serve as a survey of various introductory music courses, specifically foundations of music terminology, music of the Western Art traditions, American Popular Music, and various music traditions outside the Western paradigm. There will also be a focus on the student gaining insights into the positive nature of music, its impact on the life of the individual, and on Society. (Prerequisite: None).

**MUSC 1221 Popular Music in the United States (MnTC 06)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a survey of American Popular Music from 1840 to the present. The music styles studied include blues, gospel, folk, bluegrass, country, ragtime, jazz, Latin music, musical theater, rock and contemporary popular music. College-level reading and writing skills recommended. (Prerequisites: None).

**MUSC 1231 Introduction to World Music (MnTC 06, 08)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

A comparative study of music and its function within cultures of non-Western countries and various American folk traditions from a listener's point of view. Cultures surveyed come from India, Indonesia, China, Japan, Africa, Central/Eastern Europe and the Americas. No previous musical experience required. College level reading and writing skills are recommended. (Prerequisites: None).

**MUSC 1301 Concert Choir (MnTC 06)**

1 credits: 4 hours lab/week - [Common Course Outline](#)

The course provides rehearsal of choral literature, the study of tone building, balance, interpretation and other factors which embody principles of good choral training. Public concerts will be given by the group and by smaller ensembles selected from the personnel of the choir. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: High school choral experience equivalency. (Prerequisites: None).

**MUSC 1302 Concert Band (MnTC 06)**

1 credits: 4 hours lab/week - [Common Course Outline](#)

The course provides the study of band literature for sight-reading, development of tone and technique. Public appearances by the group and by small ensemble groups will be formed from various sections of the band. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: High school Concert Band experience equivalency. (Prerequisite: None).

**MUSC 1321 Aires (MnTC 06)**

1 credits: 2 hours lab/week - [Common Course Outline](#)

Variety of choral and performance style is the predominant feature of the ensemble including vocal jazz, show, choral and chamber. Extensive work with choreography and public performance make this ensemble performance intensive. Music expression, stage presence, audience dynamics and singing technique are stressed. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: High school choral experience equivalency. (Prerequisites: None).

**MUSC 1322 Jazz Band (MnTC 06)**

1 credits: 2 hours lab/week - [Common Course Outline](#)

This course includes rehearsal and performance of Jazz ensemble music. Musical expression, nuance, style and performance technique are stressed. Performance and audience dynamics as part of the human and humane nature of music are gathered through many varied public performances. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: Reading, writing and/or mathematics proficiency. High School Concert and/or Jazz Band experience equivalency. (Prerequisites: None).

**MUSC 1340 World Drum Ensemble (MnTC 06, 08)**

1 credits: 2 hours lab/week - [Common Course Outline](#)

The World Drum Ensemble is a percussion ensemble that practices and performs World Beat Music. This is defined as music created in the New World (the Americas) by African slaves who combined African cultural elements (instruments, rhythms, and other musical concepts) with the elements they found in the New World (Harmonies, Melodies and other musical elements). The ensemble presents an opportunity for students to participate in world drumming through the practice and performance of World Beat percussion music from various world cultures. (Prerequisites: None).

**MUSC 1401 Beginning Class Piano (MnTC 06)**

3 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

Basic knowledge of piano technique will include note reading in both Treble and Bass clefs, with emphasis on rhythmic reading; playing and transposing simple pieces in the keys of CFGDAE; and harmonizing with tonic and dominant 7th chords. Composition of simple pieces and the history of keyboard literature will also be introduced. (Prerequisites: None).



**MUSC 1421 Beginning Class Voice (MnTC 06)**

3 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)  
Group instruction in the fundamentals of correct vocal production, breathing, breath management, posture, vocal health and stage presence. This class should be special interest to students who are interested in experience in creating music with the art of singing at any level as it will give them the opportunity for greater understanding and development of their voices. (Prerequisites: None).

**MUSC 1422 Intermediate Class Voice**

2 credits: 2 hours lab/week - [Common Course Outline](#)  
This course provides an intermediate and advanced group instruction in vocal performance skills, methods, and techniques. This class should be of special interest to students who are planning to teach music classes at any level as it will give them the opportunity for greater understanding and development of their voices and how to teach others these concepts. It is also a valuable course for students interested in solo, theatrical, and vocal ensemble performance. (Prerequisite: MUSC 1421).

**MUSC 1431 Beginning Guitar Class (MnTC 06)**

3 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)  
Basic knowledge of guitar technique including: tuning the guitar, chords and chord strumming (open chords), performing songs, fret board logic (how the fret board is laid out), exercises, scales, and melodic improvisation, music notation reading (music literacy), barre chords, guitar maintenance. No previous music knowledge necessary. (Prerequisites: None).

**MUSC 1440 Guitar/Bass Lessons**

1 credits: 0.5 hours lab/week - [Common Course Outline](#)  
Private instruction in instrumental music. The class is focused on developing the technical and performance abilities of students at any level and any interest. This class may be of special interest to students who are planning to teach music classes at any level as it will give them the opportunity for greater understanding and development of their instrument. Recommended entry skills/knowledge: College level reading and writing skills. (Prerequisites: None).

**MUSC 1450 Voice Lessons**

1 credits: 0.5 hours lab/week - [Common Course Outline](#)  
Individualized voice lessons cover from basic to advanced vocal techniques and performance practices for all voice ranges from qualified instructors. (Prerequisites: Audition or consent of instructor).

#### MUSC 1460 Piano Lessons

1 credits: 0.5 hours lab/week - [Common Course Outline](#)

Private instruction in piano performance. The class is focused on developing the technical and performance abilities of students at any level and any interest. This class may be of special interest to students who are planning to teach music classes at any level as it will give them the opportunity for greater understanding and development of the piano technique. Recommended entry skills/knowledge: College level reading and writing skills and previous piano experience. (Prerequisites: None).

#### MUSC 1470 Woodwind Lessons

1 credits: 0.5 hour lab/week - [Common Course Outline](#)

The course provides private instruction in instrumental music. The class is focused on developing the technical and performance abilities of students at any level and any interest. This class may be of special interest to students who are planning to teach music classes at any level as it will give them the opportunity for greater understanding and development of their instrument. (Prerequisites: None).

#### MUSC 1480 Brass Lessons

1 credits: 0.5 hour lab/week - [Common Course Outline](#)

The course provides private instruction in instrumental music. The class is focused on developing the technical and performance abilities of students at any level and any interest. This class may be of special interest to students who are planning to teach music classes at any level as it will give them the opportunity for greater understanding and development of their instrument. (Prerequisites: None).

#### MUSC 1490 Percussion Lessons

1 credits: 0.5 hour lab/week - [Common Course Outline](#)

The course provides private instruction in instrumental music. The class is focused on developing the technical and performance abilities of students at any level and any interest. This class may be of special interest to students who are planning to teach music classes at any level as it will give them the opportunity for greater understanding and development of their instrument. (Prerequisites: None).

#### MUSC 1501 Musicianship I (MnTC 06)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is designed for liberal arts and science students. The course begins with a review of the fundamentals of music including music notation, scales, key signatures, interval theory, melody, harmony, and part writing. Sight Singing and Ear Training are included in the course. Musicianship I is open to all, and it is the first course in a four-semester sequence of music theory offerings. (Prerequisites: None).

### MUSC 1502 Musicianship II

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is the second course in a four-semester sequence required for music majors. The course begins with a review of basic harmonic vocabulary and part writing, followed by the study of inversions of triads, non-harmonic tones, seventh chords, and diatonic modulation. Sight and ear training are included in the course. (Prerequisites: MUSC 1501).

### MUSC 1601 Electronic Music Composition I (MnTC 06)

3 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a "hands-on" introduction to the world of contemporary electronic music. Students will investigate the relationship between computer, software, electronic instruments, and original music creation. The student will investigate basic MIDI concepts, music creation applications, basic audio recording concepts, and the planning process for original music creation. The student will be presented with and practice the use of numerous software and hardware incorporating multi-station electronic music lab. The student will also have individual studio time in one of the MIDI studios for original music compositions. (Prerequisites: None).

### MUSC 1602 Electronic Music Composition II (MnTC 06)

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is the second of a two-part hands-on introduction to the world of contemporary electronic music. The student will create original music and multimedia content expressing a consolidated aesthetic expression implementing contemporary music and new media tools. The additional contemporary tools are primarily synchronized video and theatrical lighting. Additions of other media are optional such as live instrumental performance and co-collaborators in other areas such as dance. (Prerequisite: MUSC 1601).

### MUSC 1621 Audio Production I

3 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is the first of a two-part hands-on introduction to the world of contemporary music recording technology. The student will learn basic terminology and practice of contemporary recording theory and practice. The student will be given individual studio time for production practice in Studio C and the surround sound studio. (Prerequisites: None).

### MUSC 1622 Audio Production II

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#) Audio

This course continues Audio Production I content with the fundamentals of recording studio sound engineering. This course will emphasize understanding sound, acoustics, signal routing, gain staging, DAW operation, microphone design, microphone placement, compression, equalization, basic mixing, basic mastering, and its application to aesthetic treatment. This course will include hands-on experience in the campus recording studios and help prepare for internship opportunities. (Prerequisites: MUSC 1621).

### MUSC 2501 Musicianship III

4 credits: 4 hours lab/week - [Common Course Outline](#)

This course is the third class in a four-semester sequence required for some music majors. The course begins with a review of diatonic chord progressions and modulation, followed by Chromatic Harmony including secondary dominant and leading tone chords, Neapolitan-sixth chords, Augmented-sixth chords, Chromatic modulation techniques, Binary and Ternary form, Theme and Variation technique, Sonata form, Rondo form, instrumental transposition. Sight Singing and Ear Training are included in the course. (Prerequisites: MUSC 1502).

### MUSC 2502 Musicianship IV

4 credits: 4 hours lab/week - [Common Course Outline](#)

This course is the fourth class in a four-semester sequence required of some music majors. The course continues from MUSC 2501. Topics covered will include: extended and chromatic harmony, including enharmonic and chromatic modulation, median relationships, music based upon modes, Twentieth-century styles including impressionism, atonality, serialism, minimalism, and jazz theory, and continued study of musical structures and counterpoint. Sight singing and ear training are included in the course. Use of the internet and RCTC computer labs required. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: College level reading, writing, and mathematics proficiency; ability to read music required. (Prerequisites: MUSC 2501).

### MUSC 2601 Studio Problems

1 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course allows students to create various productions beyond the second semester. Students will meet at arranged critiques with the instructor throughout the semester. Activities and projects include solo or work with students from other disciplines for public concerts. This course can be repeated twice. (Prerequisites: Any of the following: MUSC 1002, MUSC 1005, MUSC 1601).

## NURSING ASSISTANT

### NA 1500 Nursing Assistant Theory and Clinical

4 credits: 2 hours lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course introduces the knowledge and concepts of basic needs and basic nursing skills in the long-term care setting. Skills are taught in a nursing laboratory setting utilizing demonstration of skills and guided practice. Students will develop the competency to provide safe and quality care to residents in the long-term care setting. The student must successfully complete the theory/lab portion of the course to participate in the clinical component. The course meets the Federal OBRA law and Minnesota Department of Health requirements for educating the Nursing Assistant. Upon completion of this class, the student will be eligible to complete the Minnesota Nursing Assistant State Competency Exam for the state NA Registry. This course is a prerequisite for the Surgical Technology program, Practical Nursing, Associate Degree Nursing programs and the Hospital Nursing Assistant course. (Prerequisites: None. Other Requirements: College Level Reading).

### NA 1602 Hospital Nursing Assistant

1 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course will give the student who has completed NA 1500 theory and clinical or an equivalent course, the knowledge, and skills necessary for employment in a hospital or other acute care setting. The student will receive classroom and lab/clinical training which will help them prepare to care for the acutely ill or chronically ill patient. Clinical experience in the hospital setting will be provided. This course may be taken concurrently with BTEC/HCOP 1610, ENGL 1117, PSYC 1611 or PSYC 2618 for those students that are pursuing completing the Advance Hospital Nursing Assistant Certificate. (Prerequisites: NA 1500. An approved equivalent Nursing Assistant course may be accepted to meet the prerequisite for this course).

### NA 1610 Nursing Assistant for Surgical Technology

5 credits: 2.5 hours lecture/week - 5 hours lab/week - [Common Course Outline](#)

This course introduces the knowledge and concepts of basic needs and basic nursing skills for the long-term care and acute care settings. Skills are taught in a nursing laboratory setting utilizing demonstration of skills and guided practice. Students will develop the competency to provide safe and quality care. After successful completion of the theory and lab components, students will have a clinical experience in both the long-term care and acute care settings. This course meets the Federal OBRA law and Minnesota Department of Health requirements for educating the Nursing Assistant. Upon completion of the class, the student will be eligible to complete the Minnesota Nursing Assistant State Competency Exam for the state NA Registry. This course is a required course for the Surgical Technology program. (Prerequisites: College Level Reading and a High school diploma or GED).

## NURSING

### NURS 1117 Fundamentals of Nursing

6 credits: 3 hours lecture/week - 7.5 hours lab/week - [Common Course Outline](#)

This course is designed to provide an overview of the nursing profession and the role of the professional nurse as a provider and manager of care. Maslow's hierarchy of basic human needs and Watson's Philosophy of Caring are introduced, along with the nursing process. Nursing care of patients with musculoskeletal alterations and care of the elderly is discussed. Students must already be admitted into the nursing program. (Prerequisites: None).

### NURS 1118 Adult Nursing I

6 credits: 3 hours lecture/week - 7.5 hours lab/week - [Common Course Outline](#)

This course focuses on the nursing care of adults with alterations in the following systems: cardiac, vascular, hematology, and respiratory. The course also discusses nursing care of adults with cancer, diabetes mellitus and the promotion of wellness. The students have the opportunity to apply classroom learning during learning during lab and clinical. (Prerequisites: Satisfactory completion of Semester I requirements in the ADN program sequence).

### NURS 2207 Maternal Newborn Nursing

3 credits: 3 hours lecture/week - 7 hours lab/week - [Common Course Outline](#)

This course is designed to assist students in developing a comprehensive knowledge of the nursing care related to reproductive health in families. The course reflects the concept that reproduction and childbearing is a normal event which affects each family and its individual members in a unique way. Concepts such as health promotion, caring and prioritization are emphasized. (Prerequisites: NURS 1118 and satisfactory completion of Semester II requirements in the ADN program sequence).

### NURS 2208 Mental Health Nursing

3 credits: 3 hours lecture/week - 7 hours lab/week - [Common Course Outline](#)

This course is designed to assist students in developing a comprehensive knowledge of nursing care, assessment, and treatment modalities for patients with psychiatric disorders. Students will focus on increasing awareness of the continuum of human behavior, utilization of therapeutic communication and legal and ethical principles that guide practice. Emphasis is placed on patient education, empathy, caring behaviors and prioritization of needs. Satisfactory completion of Semester II requirements in the ADN program sequence must be met before enrolling. (Prerequisites: None).

### NURS 2209 Pediatric Nursing

3 credits: 3 hours lecture/week - 7 hours lab/week - [Common Course Outline](#)

This course is designed to assist the student in developing a comprehensive knowledge of the nursing care of the pediatric patient. There is a focus on normal growth and development of the well child from infancy through adolescence. Principles of nursing management of children with disabilities and illnesses are examined with an emphasis on the effects of illness/hospitalization on the family unit and the growth and development of the child. Concepts relate to health prevention and promotion of the pediatric patient with acute/chronic conditions and communicable diseases. Clinical experiences are designed for application of theory to patient care. (Prerequisites: NURS 2207, NURS 2208, NURS 2217 and satisfactory completion of semester III requirements in the ADN program course sequence).

### NURS 2217 Adult Nursing II

6 credits: 3 hours lecture/week - 7.5 hours lab/week - [Common Course Outline](#)

This course offers acute medical-surgical and gerontologic nursing experiences - focusing on aging, chronic illness, and end-of-life care. Selected topics of systems include: integumentary, immune, gastrointestinal, renal, reproductive, and neurological disorders. Clinical experiences provide further application of theoretical concepts. Satisfactory completion of Semester II requirements in the ADN program sequence must be met before enrolling. (Prerequisites: None).

### NURS 2218 Advanced Concepts in Nursing

3 credits: 3 hours lecture/week - 7 hours lab/week - [Common Course Outline](#)

This course provides an overview of the nursing care for critically ill patients. Principles of nursing management of patients with endocrine disorders, multisystem organ dysfunction, and common emergencies including trauma and burns are examined. Organ donation/transplant issues and nursing implications are discussed. Ethical considerations and priority nursing interventions discussed. Each student has one acute care clinical laboratory period a week. Students will have an opportunity to observe in a critical care and/or emergency care setting to correlate RN roles and health team collaboration in meeting priority patient health needs. (Prerequisites: NURS 2207, NURS 2208, and NURS 2217. Satisfactory completion of Semester III requirements in the ADN program sequence).

### NURS 2219 Leadership and Management in Nursing

4 credits: 2 hours lecture/week - 15 hours lab/week - [Common Course Outline](#)

This course is a study of nursing leadership and management. Students learn to assign, supervise, and evaluate nursing care for a group of patients by leading a group of nursing peers. Students provide comprehensive care to multiple patients including discharge planning to assist in the role transition to a beginning staff nurse. Course content also includes current trends in health care delivery systems and the implications for nursing. Clinical experience is designed for application of theory to patient care. Satisfactory completion of Semester III requirements in the ADN program course sequence must be met prior to enrolling. (Prerequisites: None).

## NURS 2400 Transcultural Nursing: Community and Global Connections

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is designed to provide nursing students the opportunity to work with culturally diverse individuals/groups either locally or globally. Students will choose either Option A: local clinical experience or Option B: travel abroad clinical experience. Students will choose a clinical practicum (Option A or Option B) where they will observe care to individuals/groups from diverse cultures. The nurse's role in and responsibilities to marginalized groups will be explored. The student will move beyond cultural sensitivity and awareness to the development of providing culturally competent care. (Prerequisites: Currently registered in the AD Nursing Program. Nursing graduates or students from non- RCTC nursing programs will be considered as space allows. Current CPR certification).

## PEACE OFFICER

### POFC 1105 Introduction to Law Enforcement

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Major topics of the course include the history and evolution of Professional Peace Officers, police operations and procedures, the court system, corrections, and the juvenile justice system. (Prerequisites: None).

### POFC 1112 Introduction to Criminal Investigation

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will cover preliminary investigations, investigative techniques, and the investigation of specific offenses. Discussions will include the importance of determining the offenders' method of operation along with the specific elements of each criminal offense. Specific investigative techniques will be discussed. (Prerequisite: None).

### POFC 1115 Basic Firearms for Peace Officers

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course will familiarize students with and examine the legal aspects of Use of Force in Law Enforcement and Firearms Usage. Topics of lecture will include the laws governing Use of Force, including authorized Use of Deadly Force by peace officers. Students should develop a fluid understanding of the Use of Force Continuum. Students will then be given instruction on the use and operations of the handgun and then be taken to the range and instructed in the different methods of shooting positions until the students can complete a certified shooting course. (Prerequisite: None).



#### POFC 2110 Police Report Writing

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course's major topics will include field notes, report structure and organization, basic grammar, data retrieval and use, and uses of police reports. (Prerequisites: POFC 1105 or POFC 1112; ENGL 1117).

#### POFC 2117 Minnesota Statutes

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course deals with statutes that the new peace officer would most likely deal with during the course of their first years of employment. (Prerequisites: ENGL 1117).

#### POFC 2118 Minnesota Traffic Statutes

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is designed to familiarize students with the Minnesota Traffic Code as prescribed by the Minnesota Board of Peace Officer Standards and Training. Students will learn the importance of a proper knowledge of Traffic Statutes. Students will also learn how to take a situation and decide what charges should be filed (what POFs have been broken). (Prerequisites: POFC 1105, POFC 1112, and ENGL 1117).

#### POFC 2119 Minnesota Statutes and Traffic Law

3 credits: 3 hours lecture/week - [Common Course Outline](#)

The major content of this course deals with Criminal statutes that the new peace officer would most likely deal with during the course of their first year of employment as well as formalization of Minnesota Traffic Code as prescribed by the Minnesota Board of Peace Officer Standards and Training. (Prerequisites: ENGL 1117).

#### POFC 2121 Human Behavior and Ethics in Peace Officers

3 credits: 3 hours lecture/week – [Common Course Outline](#)

In this course the major focus deals with the types of reactions peace officers may encounter with people who are experiencing emotional or psychological difficulties. Police Ethics include definitions, perception, concerns, and the history of police deviance with the forging of an occupation. The working environment is discussed. The ideology and culture of police and the motive and justification for breaking normative bonds are covered. Police brutality, abuse of authority, police prejudice and discrimination are discussed. Drug-related police deviance, varieties of police deviance, internal and external controls influencing police deviance and corruption and prospects for controlling deviance are also included. (Prerequisites: POFC 1105 or POFC 1112; ENGL 1117).

### POFC 2125 Community Policing and Service

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Major topics of the course will include police administration, various police duties and responsibilities, police statistics and research, and police work involving community service. A heavy emphasis will be placed on police ethics, leadership, and police influence within the individual decision-making process. Other topics include diversity, problem solving, critical thinking, communication. (Prerequisite: ENG 1117).

### POFC 2250 Internship for Peace Officers

2 credits: 2 hours lab/week - [Common Course Outline](#)

This course offers students the opportunity to interact with current criminal justice agencies. Students will be given the opportunity to ride along with both large and smaller agencies in Southeast Minnesota. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: Acceptance into the Peace Officer or Criminal Justice Programs. (Prerequisites: POFC 1105 or POFC 1112. Other Requirements: Accepted into the Professional Peace Officer or Criminal Justice Program).



## PEACE OFFICER SKILLS

### POFS 2101 Crime Scene Processing

2 credits: 1 hour lecture/week - 5 hours lab/week - [Common Course Outline](#)

This course covers the responsibilities and duties of officers conducting a preliminary investigation of a crime scene. Topics include recognition, preservation, and recovery of physical evidence, crime scene photography, sketching and recovery of latent fingerprints. This course focuses on lab activities allowing students to develop skills relative to crime scene processing, evidence collection and presentation. In order to enroll in this course a student must have approval by a Minnesota Professional Peace Officer Education Program Coordinator and successful completion of psychological and physical exams. Completion Requirements: A minimum of a C grade will be required to pass this course. (Prerequisites: None. Other Requirements: Program Approval and Peace Officer or Criminal Justice Major).

### POFS 2102 Traffic Enforcement

3 credits: 1 hour lecture/week - 3 hours lab/week - [Common Course Outline](#)

This course covers instruction and practical experience in radar operation and DUI detection, testing, and processing. Students demonstrate their ability in simulated situations through the use of appropriate methods and by preparing concise, accurate reports. Elements of traffic offenses are analyzed and applied to hypothetical situations. Students learn the basic theory and use of radar and current trends in violations and arrest. Students learn the performance and limitations of patrol vehicle under different conditions. In order to enroll in this course a student must have approval by a Minnesota Professional Peace Officer Education Program Coordinator and successful completion of psychological and physical exams. Completion Requirements: A minimum of a "C" grade will be required to pass this course. (Prerequisites: None. Other Requirements: Program Approval and a Peace Officer or Criminal Justice Major).

### POFS 2103 Defensive Tactics

2 credits: 1 hour lecture/week - 3 hours lab/week - [Common Course Outline](#)

This course works to install confidence to overcome physical resistance and to control the person under arrest or being restrained. This course aids to reduce the likelihood of injury to the peace officer, minimize the use of excessive force and positive self-image with physical and mental conditioning. Basic techniques on how to best defend against certain common types of attack and reasonable force necessary to overcome the resistance being offered, analysis of physical confrontations and basic principles are demonstrated with practical exercises. Lectures include terminology used when documenting and testifying in court regarding the use of force compliance techniques. The use of chemical agents is also covered. Students will learn proper deployment techniques and then be exposed to chemical agents. In order to enroll in this course a student must have approval by a Minnesota Professional Peace Officer Education Program Coordinator and successful completion of psychological and physical exams. Completion Requirements: A minimum of a "C" grade will be required to pass this course. (Prerequisites: None. Other requirements: Program Approval and a Peace Officer or Criminal Justice Major).

### POFS 2104 Firearms for SKILLS

2 credits: 1 hour lecture/week - 3 hours lab/week - [Common Course Outline](#)

This course covers the use of deadly force, firearms safety, care and cleaning of service weapons, and firearms shooting principles. The course focuses on student's decision-making ability and firearms shooting ability. Student's will shoot handguns, shotguns, and rifles with a variety of different types of ammunition. Student's will be involved in simulator training on a variety of situations and be evaluated on their decision making. Students will learn techniques associated with responses to active shooter situations. In order to enroll in this course a student must have approval by a Minnesota Professional Peace Officer Education Program Coordinator and successful completion of psychological and physical exams. Completion Requirements: A minimum of a "C" grade will be required to pass this course. (Prerequisites: None. Other Requirements: Program Approval and a Peace Officer or Criminal Justice Major).

## POFS 2105 Patrol Practical

3 credits: 1 hour lecture/week - 5 hours lab/week - [Common Course Outline](#)

This course covers the factors and duties relative to patrol and basic communication systems. Proper patrol techniques relative to handling a variety of different situations will be covered. This course includes knowledge and skills to preserve the peace and tranquility of the community and to protect the lives and property of the people who live in and visit that community. This course also covers patrol functions and patrol techniques relative to beat patrol. Officer survival, misdemeanor and felony crimes in progress, searches of buildings and persons, traffic stops, and dealing with field problems are discussed. Accident investigation and defensive driving issues are also covered in this class. Accident investigations focus on basic-on-scene investigations of traffic accidents. Topics of hazardous materials and blood borne pathogens are also covered. Students will also learn how to deal with individuals that are suffering a crisis or suffer from mental illness. In order to enroll in this course a student must have approval by a Minnesota Professional Peace Officer Education Program Coordinator and successful completion of psychological and physical exams. Completion Requirements: A minimum of a "C" grade will be required to pass this course. (Prerequisites: None. Other Requirements: Program Approval and a Peace Officer or Criminal Justice Major).

## PHILOSOPHY

### PHIL 1010 Scientific Reasoning (MnTC 02)

3 credits: 2 hours lecture/week - [Common Course Outline](#)

This class provides a philosophical and historical introduction to scientific reasoning, with a special emphasis on learning to think critically and methodically about everyday issues related to science. Students will learn to think carefully about what distinguishes science from non-science, the limits to scientific knowledge, and how science has changed over time. Along the way, they will be introduced to a variety of important scientific ideas and debates, both current and historical. (Prerequisites: None).

### PHIL 1114 Introduction to Philosophy (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces students to the main problems and methods of philosophy. Significant areas of focus include ethical and aesthetic values, the nature of reality and knowledge, logic and critical reasoning, and the global history of philosophy. Students will come away with an expanded understanding of the human condition and human cultures, especially concerning behavior, ideas, and values expressed in works of philosophy. They will have ample opportunity to practice and improve their abilities to read, write, and reason critically. (Prerequisites: None).

**PHIL 1125 Ethics (MnTC 06, 09)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course examines the problems that arise when thinking systematically about conduct and values. It includes a survey of historical and contemporary views about the right and the good, moral character, and social justice. Students will learn to apply moral theories, concepts, and principles to real-world ethical issues and cases. This is a writing-intensive course that will provide students an opportunity to practice and improve their ability to write argumentative essays. (Prerequisites: None. Other Requirements: College-level reading and writing).

**PHIL 1130 Environmental Ethics (MnTC 06, 10)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides the background ethical theories, principles and concepts necessary to grapple with ethical issues of environment, sustainability, globalization and scarcity. Specific attention will be given to personal responsibility and the interconnectedness of human activity and the natural world. Students will learn about different approaches to environmental ethics and will apply them to real-world problems. A special emphasis will be placed on critical reasoning and justification. College-level reading and writing is recommended. (Prerequisites: None).

**PHIL 1135 Bioethics (MnTC 06, 09)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This medical ethics course provides background moral theories, principles, and concepts necessary to grasp the ethical issues in life, death, health care, biotechnology, and the life sciences. Attention will be given to the social context of ethical decisions and there will be an emphasis on critical reasoning and justification, and on reading and responding to medical ethics and biological research. Special topics that may be discussed include: definitions of life and death, autonomy, paternalism, voluntary informed consent, rights, obligations, clinical trials, confidentiality, abortion and reproductive technologies, cloning, stem cells, end of life issues, transplantation and fair allocation of limited resources. (Prerequisites: None).

**PHIL 1145 Logic (MnTC 04)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introduction to the systematic study of reasoning and argumentation. Students will learn how informal and formal logic can be used to evaluate the strength or validity of arguments, especially ones drawn from ordinary language. They will also develop the capacities to recognize common fallacies, and to apply the methods of logic to problems of contemporary interest. While this course challenges students with abstract reasoning, the study of logic will demystify the underlying structure of language, highlight abuses of reason, teach the values of critical reading, and suggest strategies for formulating coherent, well-reasoned writing. (Prerequisites: None).

PHIL 1150 Computing and AI Ethics (MnTC 06, 09)

3 credits: 3 hours lecture/week – [Common Course Outline](#)

In a world increasingly reliant on technology, the ethical implications of computing and artificial intelligence (AI) are more relevant than ever. This course seeks to bridge the gap between technology and ethical inquiry, providing students with the tools to critically evaluate and address ethical dilemmas in various domains of computing, AI, and data science. The course covers a wide range of topics, from fundamental ethical theories to futuristic considerations in AI ethics. Topics include the history of computing, AI and machine learning basics, data privacy, algorithmic bias and fairness, surveillance, security, employment in the age of AI, bioethics in computing, ethics in video games and virtual reality, AI ethics in science fiction, and future policy and design considerations. Other requirements: College Level Reading (Prerequisites: None).

PHIL 1160 Philosophy and World Religions (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will introduce students to philosophical issues arising with respect to a wide variety of religious traditions, including Hinduism, Buddhism, Judaism, Christianity, Islam, and Taoism, as well as indigenous traditions. Students will critically examine diverse claims about the nature of religion and religious experience, the existence of God, the character of ultimate reality, the relationship between religion and science, and other topics. This course may involve site visits to local religious communities. (Prerequisites: None).

PHIL 2001 Science Fiction and Philosophy (MnTC 06, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will explore philosophical themes in the context of science fiction (and fantasy) literature and film. Major topics include the relationship between mind and body, the nature of scientific inquiry, and issues concerning social and political philosophy and the philosophy of race and gender. Students will learn to apply basic methods of philosophical inquiry, and will engage with work from a culturally diverse selection of authors and filmmakers. The material will be selected with a goal of expanding the students knowledge of the human condition and human cultures, especially as this relates to ideas, values, and institutions. Particular attention will be given to the cultivation of critical reading and writing. College-level reading and writing is recommended. (Prerequisites: None).

PHIL 2112 Political Philosophy (MnTC 06, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will survey political concepts, theories, and issues. It will examine the theoretical support for political ideologies, as well as concepts such as rights, obligation, equality, justice, property, punishment, liberty, obedience, and authority. College level reading and writing is recommended. (Prerequisites: None).

### PHIL 2130 Business Ethics (MnTC 06, 09)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will help students to develop and improve their ability to make ethical decisions in the business world. Students will become familiar with common types of ethical dilemmas that arise in business, and will learn how to apply ethical concepts to help resolve them. The course will cover stakeholder relationships, conflicts between personal morality and organizational norms, and the relationship between law and ethics. We will also discuss the social responsibilities of business regarding issues such as discrimination and diversity, the environment, and international relations. (Prerequisites: Appropriate placement in college level reading and writing).

## PHYSICAL EDUCATION

### PHED 1100 Badminton

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to acquaint students with the game of badminton. Participants will be taught proper rules and techniques used in playing the game of badminton, i.e., serves, drives, clears, smashes, and drops. Emphasis will be placed on both singles and doubles game strategies to match recreational or competitive situations. (Prerequisites: None).

### PHED 1101 Canoeing

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course in recreational canoeing allows students to experience both lake and river canoeing. Students will learn the fundamentals of canoeing; launching, landing and transporting a canoe, proper stroke technique, situational water reading, selecting canoes and the correct equipment, water safety and etiquette, crew communication and river rescue. (Prerequisites: None).

### PHED 1103 Social Dance

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course provides the opportunity to develop physical skills in the performance of a number of social/ballroom dances, as well as an appreciation for the art and skill of social dance. The dances will include a variety of steps in the fox-trot, waltz, swing, two-step, mambo, rumba, cha-cha, polka and line dance. (Prerequisites: None).

#### PHED 1105 Lifetime Fitness

3 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course provides current information encompassing areas such as cardiovascular efficiency, muscle strength and endurance, flexibility, and weight and stress management, all which contribute to the beneficial effects of living a healthier life. This course includes lecture material supported by laboratory assessments to assist individuals in evaluating their current level of health, wellness and physical fitness. By performing these assessments individuals are made aware of conditions and lifestyle choices that they may wish to modify for optimal health and fitness. (Prerequisites: None).

#### PHED 1106 Soccer

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is intended to introduce the student to the basic and intermediate aspects of soccer. Through instruction, demonstration, practice and play the student will learn the skills, rules, and strategies involved in the game of soccer. Other aspects covered are basic conditioning, fitness principles and the benefits of exercise. Group work is utilized to develop cooperation and teamwork. (Prerequisites: None).

#### PHED 1107 Cycling (Non-Motorized)

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

The student will learn the basic rules of operation of the bicycle, rules of the road, and how to properly care for equipment. The student will be introduced to the value of cycling in achieving physical fitness and will be encouraged to continue cycling as a lifetime skill. (Prerequisites: None).

#### PHED 1110 Bowling

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#) This course is intended to teach students how to bowl using the spot bowl system. Students will learn how to keep score and select appropriate equipment to assure that bowling can become a lifelong leisure activity. (Prerequisites: None).

#### PHED 1111 Archery

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#) This course is designed to teach students the basic fundamental skills and safety components of this sport. Other elements explored include the history of archery, specific terminology and the differences within the field of archery between recreational, competitive and archery used for hunting. This course hopes to expose the student to archery as a lifetime activity. (Prerequisites: None).



#### PHED 1112 Jogging/Walking

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course designed to introduce the student to various aspects of jogging and walking activities. Topics to be covered include but are not limited to, stretching, form, fitness principles, and proper equipment needed for jogging and fitness walking. The course will help students to develop lifelong fitness programs by developing and understanding aerobic principles, cardiovascular conditioning, nutrition and performance enhancement. (Prerequisites: None).

#### PHED 1113 Social Dance II

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course provides the opportunity to develop a more advanced variety of step patterns, style and skill in the performance of a number of social/ballroom dances, as well as deeper appreciation for the art and skill of social dance. This course will review, enhance and develop to the next level, dances previously learned in PHED 1103 Social Dance: Foxtrot, Waltz, Two-Step, Swing, Polka, Cha-Cha, Mambo, and Rumba, as well as several contemporary line dances. New dance skills will be introduced as well, with Night Club Two Step offering a midrange dance tempo alternative, Cumbia which is a step of Latin dance influence that can be performed at a range of tempos and the American Tango, which takes social dancing to a more complex level of synchronized and precision movements. (Prerequisites: PHED 1103).

#### PHED 1114 Softball

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This is an activity class designed to offer instructions on specific skill development, playing strategy, scoring, and rules application to the game of recreational slow pitch softball. (Prerequisites: None).

#### PHED 1115 Volleyball

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is intended to introduce the student to all aspects of volleyball. Through instruction, practice and play the student will learn the skills, rules and strategies involved in the game of volleyball. The course will also cover some of the basic aspects the benefits of exercise through sport specific conditioning and fitness. Students will also be exposed to the importance of communication, teamwork and cooperation. (Prerequisites: None).

#### PHED 1117 Swimming

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is intended to introduce the student to all aspects of the activity of swimming, regardless if the learner is a beginning or intermediate swimmer. The course will include instruction in techniques of swimming strokes with basic water safety and current rescue techniques. Instruction will be given in a variety of formats for teaching swim strokes along with technical analysis and evaluation for improvement. Other concepts may include endurance swimming utilizing various strokes to match swimming situations. (Prerequisites: None).

#### PHED 1122 Circuit Training

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#) This course is designed to teach students techniques in weight training and aerobic components of fitness. The course will utilize both fitness machines and free weights. These concepts contribute to muscular strength, endurance and cardiovascular efficiency, for a lifetime of fitness. The student will also be exposed to basic anatomy/physiology principles regarding warm-ups, cool downs, stretching and body structure. (Prerequisites: None).

#### PHED 1124 Tai Chi and Meditation

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#) Tai Chi is a system of gentle and slow-motion exercise for the mind/body connection. This course will expose students to a beginning level of simplified Tai Chi form and several meditation techniques for stress management. (Prerequisites: None).

#### PHED 1125 Yoga For Life

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#) Yoga is a discipline associated with physical, mental, emotional, and spiritual benefits. The focus of the class will be on Hatha Yoga, which is that branch of Yoga that works primarily with the body through asanas or postures. These postures are performed in a variety of positions, including; seated, kneeling, standing, lying and partially inverted on the floor. Breathing exercises, meditation and relaxation will also be highly emphasized. Yoga postures enhance flexibility, balance, and strength, while focusing on mind/body awareness. (Prerequisites: None).

#### PHED 1126 Step Aerobics

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#) This course implements the concept of cardiovascular conditioning through the use of steps, risers and fitness routines set to music. Each workout utilizes a 4-10" step bench for aerobic exercise routines for cardiovascular fitness, but also includes the implementation of activities that improve muscle strengthening, flexibility, balance, reaction time and coordination. (Prerequisites: None).

#### PHED 1127 Body Toning

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#) This course is an exercise based participation class designed to increase muscle strength, endurance, tone and flexibility, using a variety of progressive resistance techniques. Other aspects discussed include the five health-related components of fitness including muscle strength, muscle endurance, flexibility, body composition, flexibility and cardiovascular efficiency. Basic nutrition concepts are explored as they relate to body composition, daily intake and proper nutrition for both healthy living and fitness performance. (Prerequisites: None).

### PHED 1128 Yoga for Life II

1 credits: hours/week vary - [Common Course Outline](#)

The practice of Hatha Yoga focuses on creating or enhancing flexibility, balance, strength, and mind/body awareness. This course builds from the foundation of PHED 1125, continuing the exploration of Hatha Yoga, including posture/asanas, breathing exercises (pranayama), meditation practices and relaxation, in more breadth and detail. (1 C). (Hours per week: 2 hours). (Prerequisites: None).

### PHED 1130 Tennis

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to cover the basic fundamentals of tennis. Skill development will include ground strokes, passing shots, overhead and drop shots as they pertain to usage in the game. Competitive play, scoring and aspects of short game and net play will also be implemented as integral components of the game. This course aims to assist the learner to develop skills to continue the game of tennis as a recreational and lifelong skill. (Prerequisites: None).

### PHED 1131 Golf

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to introduce the student to the game of golf. Skills for successful play that will be taught include many elements within the fundamentals of the grip, stance and swing. The class is designed to work on the fundamentals and progress with skill development, learn the rules of the game, as well as game/course management during a round of golf. (Prerequisites: None).

### PHED 1132 Speed and Power Running

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#) This

course is designed to introduce the student to various aspects of sprinting and explosive running activities. Topics to be covered include: proper technique for stretching and running as well as fitness principles and proper equipment application required to implement running and power fitness. (Prerequisites: None).

### PHED 1133 Strength Training for Men and Women

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to teach students techniques for effective weight training, while utilizing body weight, machines and free weights to assist students in becoming physically stronger. The student will also be exposed to basic anatomy and physiology principles regarding warm-up, stretching and body musculature. (Prerequisites: None).

#### PHED 1138 Outdoor Winter Activities

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to introduce the student to a wide variety of outdoor recreational leisure and fitness winter activities. This course is somewhat weather-dependent, thus activities may include, but are not limited to: cross-country skiing, downhill skiing, snowshoeing, ice skating, boot hockey, broom ball, ice fishing, and winter jogging. (Prerequisites: None).

#### PHED 1141 Hiking and Orienteering

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course teaches the use of map and compass for navigational purposes. This class is designed to incorporate the use of map and compass along with a variety of hiking experiences, as a leisure activity and an enjoyable means to physical fitness and a greater appreciation for the outdoors. (Prerequisites: None).

#### PHED 1143 Self-Defense

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to provide the student with a variety of practical skills necessary to escape a physical attack. Special tactics such as throws, kicks, falls, submission holds and counter moves are taught. Students are taught how to avoid potentially threatening situations, evaluate surroundings and develop preventative routines for personal safety, while acquiring skills to extricate themselves from dangerous physical altercations. (Prerequisites: None).

#### PHED 1144 Introduction to Scuba

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course includes the basics of safe diving taught through academic training, and confined and open water diving sessions. The course is delivered through both lecture and pool practice sessions. Open water dives will be held at an area lake. Recommended Entry Level Skill: Students should be comfortable being in the water, be able to swim 200 yards nonstop and be able to comfortably tread water for 10 minutes. Successful completion of all of the elements of the course earns the PADI (Professional Association of Dive Instructors) Open Water certification. (Prerequisites: None).

#### PHED 1145 Individual Leisure Sports

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed for students to develop skills relating to sports that are more family, social or designed for recreational competition. These sports: table tennis, horseshoes, disc golf, badminton, pickleball and bocce ball are competitive, yet are activities that will provide opportunities for students to learn now, develop through practice and participation, yet continue to be involved with throughout their lifetime. (Prerequisites: None).

#### PHED 1146 Team Recreational Sports

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed for students to develop skills relating to sports that are more family, social or designed for recreational competition. These sports; team handball, floor hockey, ultimate Frisbee, soccer, flag football and kickball can be performed as family activities or in a competitive amateur setting. This course is designed to expose students to opportunities for learning through practice and participation, to develop team sport skills, continue to be active physically and enjoy the social aspects of team sports throughout their lifetime. (Prerequisites: None).

#### PHED 1150 Basic TRX Training

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to teach students techniques for improving overall strength and core training with the TRX suspension trainer workout system. The TRX Suspension Trainer utilizes leverage, gravity and the student's bodyweight to perform hundreds of exercises. Suspension training with bodyweight exercises develops muscle strength, and increases balance, flexibility and core stability simultaneously. This course also includes basic anatomy, as well as basic physiology principles as they relate to preparing the body for work, increasing load and the progression of increasing physical demands for continued improvement in the areas of strength, flexibility, muscle endurance, core stability and quality of life. (Prerequisites: None).

#### PHED 1151 High Intensity Interval Training (HIIT) with TRX Suspension Training

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to teach students High Intensity Interval Training techniques including overall muscle strength, core training with increased power concepts by utilizing the TRX suspension trainer workout system. HIIT, also known as metabolic conditioning, requires the student to engage in directed, intense physical activity for short bursts, repeatedly, with limited recovery time. This format of training provides a tremendous aerobic, anaerobic, strengthening and power building workout. The TRX Suspension Trainer uses leverage, gravity and the individual's bodyweight to perform hundreds of intense exercises. Suspension training with bodyweight exercises develops strength, balance, flexibility and core stability simultaneously. The Versatility of HIIT TRX training offers a huge variety of exercises to choose from, and build on, for effective aerobic and anaerobic workouts. This course includes basic anatomy and physiological principles regarding how to increase aerobic and anaerobic load and the process for increasing physical demands for improvement in the areas of aerobic fitness, strength, flexibility, muscle endurance, core stability and quality of life. (Prerequisites: None).

#### PHED 1189 Boot Camp

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed for Law Enforcement students who need additional assistance in performing to the physical standards set by their field. Students taking this course will have been directed to this structured physical training format to enable them to both reach their desired goal of passing the physical training portion of their skills, as well as to gain a comprehensive understanding of the complexities that diet, healthy lifestyle choices and continued daily physical training contribute toward maintaining optimal fitness levels throughout their career. Although designed for POFC students, this course is open to any student. (Prerequisites: None).

#### PHED 1190 Strength, Agility and Quickness Training for Football Athletes

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to teach football team players techniques in weight training in both free weights and machines, to assist students in becoming stronger and better conditioned football players. The student will also be exposed to basic anatomy/physiology principles regarding warm-up, stretching and body musculature related to the sport of football. (Prerequisite: None).

#### PHED 1191 Strength, Agility and Quickness for Volleyball and Soccer Athletes

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to train the soccer and volleyball athlete techniques in strength, agility, and speed to prepare for the upcoming sport season. The student will also be exposed to basic anatomy/physiology principles regarding warm up, stretching, overuse injury prevention, and body musculature. Proper biomechanics education will be provided for jumping, hitting, pivoting, and sprinting activities as they relate to their respective sports. (Prerequisites: None).

#### PHED 1192 Strength, Agility and Quickness Training for Basketball Athletes

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to guide basketball players in techniques of strength, speed, and agility to prepare themselves for their season. Areas addressed will be the principles regarding proper warm-up, stretching, strength training, cardiovascular endurance training and nutrition. Biomechanical breakdown, analysis and education will also be provided for all components of running, jumping and plyometric skills. (Prerequisites: None).

#### PHED 1193 Strength, Agility and Quickness Training for Wrestling Athletes

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to guide the wrestling athlete through techniques in strength, endurance, speed, power and agility that will prepare the athlete for the upcoming season. The course is focused on sport specific principles and includes a detailed sport specific nutrition component. Students will become familiar with basic anatomy and muscle structures, and how the development of specific structures, through proper training and nutrition, can promote optimal performance throughout training and in competition. (Prerequisites: None).

#### PHED 1194 Strength, Agility and Quickness Training for Baseball and Softball Athletes

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to guide the pre-season baseball/softball athlete in techniques of strength, agility, and quickness that will prepare the athlete for the upcoming baseball/softball season. The student will also be exposed to basic anatomy/physiology principles regarding warm up, stretching and body musculature. Proper biomechanics education will be provided for overhead throwing, sport specific pitching mechanics, hitting, multi-directional movement, fielding, and base-running techniques. (Prerequisites: None).

#### PHED 2154 Introduction to Biomechanics

3 credits: 2 hours lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to introduce students to the fundamentals of movement as it relates to biomechanics. Biomechanics is utilized to study improving human performance by exploring muscle force in relationship to velocity, length and time. Linear motion, angular motion, coordination, proprioception, viscoelasticity all interrelate through neuromuscular and skeletal systems to create movement. Biomechanics explains, evaluates, analyzes and prescribes amendments to improve performance. (Prerequisites: None).

#### PHED 2155 Introduction to Kinesiology

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to introduce students to the field of kinesiology. Kinesiology explores the use of movement and physical activity, and its impact on the development of physiological, motor, and psychological aspects of students by analyzing movement and creating movement sequences for learning efficient movement patterns for optimal performance. (Prerequisites: None).

#### PHED 2240 Methods of Group Fitness Instruction

3 credits: 3 hours lecture/week - [Common Course Outline](#) Teaching group fitness requires an in-depth understanding of both the anatomy and physiology of the body as well as training principles to provide a safe, exciting and challenging workout for clients. This course is designed to provide students with the actual physical components of teaching using cues and routines along with progressions designed to provide challenges in any group fitness setting. This course provides both the foundation for understanding the body systems and how various training regimes benefit the body as a whole, and the hands-on incorporation of teaching techniques. This class contains a lab-like component. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: PHED 1105, PHED1122, PHED 1124, PHED 1125, PHED 1126, PHED 1127, PHED 1132, PHED 1133, and PHED 2245. (Prerequisites: None).

### PHED 2241 Essentials of Personal Training

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course explores the foundations of exercise science, safe and effective exercise techniques, program design and safety and legal issues of providing personal training instruction to clients. This course takes an in-depth look into anatomy and physiology and how it relates to the body's adaptation to both anaerobic and aerobic training regimes. Evaluating individuals utilizing physical testing protocols and assessments and developing exercise prescriptions for clients based on their present levels of fitness and their goals is the primary focus, while understanding the intricate interrelationships of the body systems to achieve optimal results. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: College Level Reading, PHED 1105, PHED 1122, PHED 1132, and PHED 1133. (Prerequisites: None).

### PHED 2242 Essentials of Strength and Conditioning

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is designed for an in-depth individualized look at strength training and conditioning in a variety of settings. This information may be applied to the individual who seeks advanced techniques within a specific regime of training or used in a team conditioning setting. The programs developed would be adaptable to meet the specific requirements of that team's interest as dictated by the particular demands of the activity. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: PHED 1105, PHED 1122, PHED 1132, and PHED 1133. (Prerequisites: None).

### PHED 2245 Group Fitness/Personal Trainer Certification Exam Prep

2 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed as a review course for students wishing to complete a Group Fitness Instructor or Personal Trainer certification. Various industry standard entities (ACE, AFAA, ACSM, NSCA, NETA) offer similar certifications that cover the specifics of a variety of strength and conditioning activities such as; Pilates, yoga, step aerobics, floor aerobics, aquatic exercise, indoor cycling, sport conditioning, functional training, kickboxing, exercise and bosa ball, various cardiovascular conditioning courses. These certification exams are intense and comprehensive. This course is a review of all concepts through the use of lecture and practical experience. Recommended, but not required: PHED 1105, PHED 1108, PHED 1122 PHED 1124, 1126, PHED 1127, PHED 1132, PHED 1133, PHED 2240, PHED 2242, PHED 2249, PHED 2250, and PHED 2253. (Prerequisites: None).

### PHED 2249 Prevention and Care of Athletic Injuries I

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course offers knowledge and practical experience in the field of athletic training taught under the guidance of a NATABOC certified athletic trainer. The NATA Competencies in Athletic Training serve as a guideline for knowledge that each student should obtain in this academic course. This course is designed to engage students in the process of reviewing, analyzing, discussing, synthesizing, and reflecting about athletic training, and to provide basic skills for students entering the field of coaching or athletic training. (Prerequisites: None).



### PHED 2252 Sport Psychology

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to provide a better understanding of the variety of personalities, learning styles, scope of emotions and cognitive variables that athletes face. Other aspects explored will include how individuals blend into a team setting, accept individualized sport instruction, incorporate motivation in practice and competition environments and personal daily activities. Sport psychology applies to all aspects of the athlete's life, thus a deeper understanding is needed of the holistic picture of the athletes approach to sport in their life. Student athletes need to address balance for school, family, finances, relaxation, resisting the temptation of substance use, personal anxiety when faced with adversity or injuries, and the skills to avoid burnout. Coaches also need to recognize these same issues as they relate to themselves and how to effectively cope with this demanding lifestyle. (Prerequisites: None).

### PHED 2253 Sport Nutrition for Performance

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Nutritional requirements for specific optimal performance can be general to some point, yet require individualization when taking into consideration the athlete and their performance goals. This course will explore nutritional strategies for both general performance and individualized dietary needs to match specific performance goals. Nutritional analysis and intake strategies will address individual needs relating to aerobic and anaerobic activity, and power and endurance aspects for optimal training, performance or competition, as it relates to specific sport applications. (Prerequisites: None).

### PHED 2260 Officiating Basketball

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course will offer an in-depth understanding of the rules of the game of basketball, as well as actual lab time moving through the mechanics of two person, on-court officiating. The course will incorporate the use of National Federation of High Schools supplemental tools, the Minnesota State High School League supplemental tools, as well as requiring acquisition of certification from, the Minnesota State High School League. This certification will be the result of taking the NFHS/MSHSL basketball exam. Lab time will be arranged. (Prerequisites: None).

### PHED 2261 Officiating Principles

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides the foundation and professional skills required to become a sports official. Topics covered include the development of philosophy of the game, personal styles, legalities and professional ethics. The application of conflict resolution techniques while applying the rules of the game to provide fair competition and meaningful participation in events for student-athletes, coaches, spectators and officials is stressed. Other areas explored include continuing education opportunities and networking. (Prerequisites: None).

#### PHED 2270 Intro to Physical Education, Health, Rec, Coaching, Fitness & Sport Mgmt

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is designed to introduce the student to professional fields of Physical Education, Health, Wellness, Fitness, Coaching, Recreation and Leisure Activity and Sport Management. Areas of exploration will include history, philosophy, objectives, scientific and scholarly disciplines, allied fields, future trends, use of technologies, issues and liability, career opportunities and prospects. (Prerequisites: None).

#### PHED 2271 Principles of Coaching

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will allow for the exploration of different coaching philosophies, the development of individual personal style while exploring coaching responsibilities, ethical obligations, and how to balance personal time with coaching duties. Coaching requires the ability to appropriately interact with many individuals, ranging from athletes and parents to officials and professional peers; this course will explore appropriate interpersonal communication, as well as game management, proper analysis of statistics, how to recognize ergogenic aid usage by athletes and the application of proper collegiate recruiting processes. (Prerequisites: None).

#### PHED 2272 Techniques of Coaching Football

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to expose students to different approaches and strategies of coaching. It will teach prospective coaches the tactical skills to effectively break down complex sport movement into teachable, basic, fundamentals. Other areas that will be covered include how to effectively teach, evaluate and prepare athletes in all aspects of competition; how to plan and execute practices, as well as, season goals and strategies and how to develop the prospective coach's own style, philosophies and methods. (Prerequisites: None).

#### PHED 2273 Techniques of Coaching Volleyball

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to expose students to different approaches and strategies of coaching. It will teach prospective coach's the tactical skills to effectively break down complex sport movement into teachable, basic, fundamentals. Other areas that will be covered include how to effectively teach, evaluate and prepare athletes in all aspects of competition; how to plan and execute practices, as well as, season goals and strategies and how to develop the prospective coach's own style, philosophies and methods. (Prerequisites: None).

#### PHED 2274 Techniques of Coaching Basketball

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to expose students to different approaches and strategies of coaching. It will teach prospective coaches the tactical skills to effectively break down complex sport movement into teachable, basic, fundamentals. Other areas that will be covered include how to effectively teach, evaluate and prepare athletes in all aspects of competition; how to plan and execute practices, as well as, season goals and strategies and how to develop the prospective coach's own style, philosophies and methods. (Prerequisites: None).

#### PHED 2275 Techniques of Coaching Baseball

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to expose students to different approaches and strategies of coaching. It will teach prospective coaches the tactical skills to effectively break down complex sport movement into teachable, basic, fundamentals. Other areas that will be covered include how to effectively teach, evaluate and prepare athletes in all aspects of competition; how to plan and execute practices, as well as, season goals and strategies and how to develop the prospective coach's own style, philosophies and methods. (Prerequisites: None).

#### PHED 2276 Techniques of Coaching Softball

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to expose students to different approaches and strategies of coaching. It will teach prospective coaches the tactical skills to effectively break down complex sport movement into teachable, basic, fundamentals. Other areas that will be covered include how to effectively teach, evaluate and prepare athletes in all aspects of competition; how to plan and execute practices, as well as, season goals and strategies and how to develop the prospective coach's own style, philosophies and methods. (Prerequisites: None).

#### PHED 2277 Techniques of Coaching Soccer

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to expose students to different approaches and strategies of coaching. It will teach prospective coaches the tactical skills to effectively break down complex sport movement into teachable, basic, fundamentals. Other areas that will be covered include how to effectively teach, evaluate and prepare athletes in all aspects of competition; how to plan and execute practices, as well as, season goals and strategies and how to develop the prospective coach's own style, philosophies and methods. (Prerequisites: None).

#### PHED 2278 Techniques of Coaching Wrestling

1 credits: 1 hour lecture/week - 1 hour lab/week - [Common Course Outline](#)

This course is designed to expose students to different approaches and strategies of coaching. It will teach prospective coaches the tactical skills to effectively break down complex sport movement into teachable, basic, fundamentals. Other areas that will be covered include how to effectively teach, evaluate and prepare athletes in all aspects of competition; how to plan and execute practices, as well as, season goals and strategies and how to develop the prospective coach's own style, philosophies and methods. (Prerequisites: None).

### PHED 2280 Introduction to Sport Facility Management

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to teach leadership, administration and management of programs in sport and fitness facilities. Students will learn leadership styles and management functions as these components are essential factors in the success of any facility or program. Facility and program marketing, budgeting, risk management and legal aspects are also examined and applied through coursework and projects that simulate the management of a sport facility. (Prerequisites: None).

### PHED 2281 Development and Management of Sport/Recreation Facilities

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to give students a general overview of the guidelines associated with the development of new and/or renovating sports facilities. The course will explore the early planning stages and then progress through the necessary steps for the proper planning of new facilities. Each student will engage in classroom, out of classroom, lecture, and discussion about the strategies that need to be implemented for developing the facility plan, designing a new facility and carrying the project through to completion. Field trips are arranged. Completion of PHED 2280 is recommended before enrolling in this course. (Prerequisites: None).

### PHED 2292 Group Fitness Instructor Internship

2 credits: 2 hours lab/week - [Common Course Outline](#)

This course is comprised of approved on-the-job supervised work experience in the field of Group Fitness Instructor. Responsibilities and duties will be comprised of hands-on instruction of classes in a group fitness setting in relation to the individual's desired area.

Duties will be determined by the direct supervisor of the internship with the approval of the internship director. (Prerequisites: None).

### PHED 2293 Personal Trainer/Group Fitness Instructor Field Experience

3 credits: 3 hours lab/week - [Common Course Outline](#)

This course is designed to allow for students to complete a variety of field observations/job shadowing in the areas of the Personal Training & Group fitness Instruction. Field observations provide students insights and experience to gain knowledge from professionals within the field as to the workings of day-to-day operations. These fields possess a high threshold for personal liability, and observations can provide students with a working experience of the daily requirements of this profession without exposing the student to the risk of stated liability that is present with hands-on involvement. (Prerequisites: Completion of course work pertaining to Personal Trainer/Group Fitness).

#### PHED 2294 Physical Education Internship

3 credits: 3 hours lab/week - [Common Course Outline](#)

The internship provides on the job supervised work experience in the field of Health, Physical Education, Recreation or Sport Facility Management. Students must be Physical Education or Sports Facility Management Majors, or have instructor permission to enroll in the course. (Prerequisites: None).

#### PHED 2295 Sport Administration Internship I

3 credits: 3 hours lab/week - [Common Course Outline](#)

This course is comprised of approved, on the job supervised work experience in the field of Sport Management or Recreation. Responsibilities and duties to be determined through the direct supervisor of the internship and approved by the internship director. Internship will include problem solving and interpersonal relations with peers and consumers, while also developing the individual's professional relationships. (Prerequisites: Physical Education, Coaching Diploma majors. Successful completion of 90% of program course work, Registration based on Internship Director Approval).

#### PHED 2296 Sport Administration Internship II

3 credits: 3 hours lab/week - [Common Course Outline](#)

This course is comprised of approved on the job supervised work experience in the field of Sport Management or Recreation Responsibilities and duties to be determined through the direct supervisor of the internship and approved by the internship director. Internship will include problem solving and interpersonal relations with peers and consumers, while also developing the individual's professional relationships. (Prerequisites: Physical Education, Coaching Diploma majors. Successful completion of 90% of program course work, Registration based on Internship Director Approval).



## PHYSICS

#### PHYS 1101 Elements of Physics (MnTC 03)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a conceptual introduction to physics, the study of the fundamental POFS and principles that underlie the physical universe. Content covered includes units and measurements, linear motion, Newton's POFS of motion, momentum, energy, temperature, heat transfer, vibrations, waves, sound, electrostatics and simple circuits. Elementary algebra is used. (Prerequisites: MATH 0098 or equivalent).

**PHYS 1103 Principles of Physics (MnTC 03)**

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is a one-semester algebra-based general introduction to physics covering the topics of motion, force, energy, fluids, waves, basic electricity, radioactivity, and emission of radiation. Problem solving is practiced both individually and in groups. The laboratory includes the acquisition of experimental data, analysis, and graphing. Group presentations on physics topics are included in the course. (Prerequisites: MATH 0099 or equivalent).

**PHYS 1117 Introductory Physics I (MnTC 03)**

5 credits: 4 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is the first semester of a two-semester algebra-based introduction to physics. The course covers topics from mechanics that include linear and parabolic motion, Newton's POFS of motion, energy, momentum, angular motion and torque, fluid mechanics, periodic motion, waves and sound, temperature, and heat transfer. Emphasis is on both conceptual learning and problem solving. (Prerequisites: MATH 1117).

**PHYS 1118 Introductory Physics II (MnTC 03)**

5 credits: 4 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is the second semester of a two-semester algebra-based introduction to physics. The course covers the following topics: the first and second POFS of thermodynamics, electrostatics, simple DC circuits, electric safety, AC circuits, magnetism, inductance, optics, relativity, and atomic and nuclear physics. Emphasis is on both conceptual learning and problem solving. The laboratory experience will provide the student with opportunities for discovery, measurement, report writing and data analysis. (Prerequisites: PHYS 1117 or permission of instructor).

**PHYS 1127 Classical Physics I (MnTC 03)**

5 credits: 4 hours lecture/week - 3 hours lab/week - [Common Course Outline](#)

This course is the first semester of a two-semester introduction to classical physics using the mathematics of vectors and calculus. Students should either have already taken or be concurrently enrolled in Calculus I (MATH 1127). Topics studied include vectors, motion in one and two dimensions, Newton's POFS of motion, work and energy, conservation of momentum, torque and rotational motion, simple harmonic motion, waves, and sound. These topics are studied through lecture, discussion, interactive problem solving, demonstrations, hands-on laboratories, and independent work. Free-body diagrams are used extensively. Emphasis is on both conceptual learning and problem solving. The laboratory experience will provide the student with opportunities for discovery, measurement, technical writing and data analysis. (Prerequisites: Students should either have already taken or be concurrently enrolled in Calculus I (MATH 1127)).

**PHYS 1128 Classical Physics II (MnTC 03)**

5 credits: 4 hours lecture/week - 3 hours lab/week - [Common Course Outline](#)

This course is the second semester of a two-semester introduction to classical physics using the mathematics of vectors and calculus. Students should either have already taken or be concurrently enrolled in Calculus II (MATH 1128). Topics studied include temperature, heat, the first and second POFS of thermodynamics, electrostatics, electric and magnetic fields, simple DC circuits, Kirchhoff's POFS, Ampere's Law, Faraday's Law, resistance, capacitance, inductance, AC circuits, electromagnetic waves, geometric and physical optics. These topics are studied through lecture, discussion, interactive problem-solving, demonstrations, hands-on laboratories, and independent work. Emphasis is on both conceptual learning and problem solving. The laboratory experience will provide the student with opportunities for discovery, measurement, report writing and data analysis. (Prerequisites: MATH 1127).

**PHYS 1134 Stellar Astronomy (MnTC 03)**

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is an introduction to stellar astronomy for the non-science major. The course covers topics that include light and spectra, the sun, stars, galaxies, supernovae, black holes and the Big Bang. In addition, students will be introduced to the stunning beauty of the universe as revealed in images, written works and direct experience through the telescope. Laboratory exercises introduce students to the methods astronomers use to study the universe. Lab work is supplemented by astronomical observing sessions at the RCTC Observatory. NOTE: ESCI 1134 and PHYS 1134 are cross-listed. Students may take one or the other for credit but will not receive credit for both. (Prerequisites: None).

**PHYS 2227 Modern Physics**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a one-semester overview of modern physics. Topics studied include special relativity, the experimental basis of quantum mechanics, wave-particle duality, introduction to wave mechanics, the Schrodinger Equation, application of the Schrodinger equation to the hydrogen atom and the development of the atomic structure, molecular structure, solid state and nuclear structure. (Prerequisites: PHYS 1128, MATH 1128 or permission of instructor).

## PRACTICAL NURSING

### PNM 1200 Pharmacology for Practical Nursing

3 credits: 2 hours lecture/week - 3 hours lab/week - [Common Course Outline](#)

This pharmacology course provides concepts of basic pharmacology and methods of calculating drug dosages. Principles and skills related to medication preparation and administration of non-parenteral and parenteral medications emphasized. Medication classification, action and effects discussed. Laboratory performance of non-parenteral and parenteral medications demonstrations prior to clinical administration of medications to patients. (Prerequisites: BIOL 1107 and ENGL 1117. Other Requirements: Admission to Practical Nursing program).

### PNM 1210 Success in Nursing

1 credits: 1 hour lecture/week - [Common Course Outline](#)

The course is designed to assist the student to develop life management skills that support success in nursing school and future career positions. Emphasis placed on the practical application of topics such as stress, time management, motivation, goal setting, and learning style. The variety of educational and career opportunities and survival tips for a successful nursing education experience discussion. (Prerequisites: None).

### PNM 1250 Nursing Fundamentals in the Care of the Older Adult

7 credits: 4 hours lecture/week - 7.5 hours lab/week - [Common Course Outline](#)

This course is designed to provide an overview of the role of the practical nurse. Maslow's hierarchy of basic human needs, Watson's Philosophy of Caring, focused nursing assessments and patient data collection are introduced. This course focuses on nursing care of older adults with common medical disorders. Basic technical nursing skills are presented with return demonstration by the student. Clinical and simulation experiences provide further application of theoretical concepts. (Prerequisites: BIOL 1107, ENG 1117. Other Requirements: This course requires admission to the Practical Nursing program, current CPR (Health Care Provider) certification).



### PNM 1320 Family and Mental Health Concepts

6 credits: 4 hours lecture/week - 5 hours lab/week - [Common Course Outline](#)

This course introduces concepts related to mental health, obstetric, and pediatric nursing. Basic principles of mental health well-being and common mental health disorders is introduced. This course also introduces concepts related to contraception, conception, antenatal, labor and delivery and postpartum nursing care as well as common complications. The pediatrics portion includes concepts related to theories of growth and development, congenital disorders, and common pediatric health disorders. Special topics include therapeutic communication, cultural diversity and utilizing standardized evidence-based assessment tools with adults and children in clinical and lab/simulation settings. Clinical experiences occur in in-patient and a variety of out-patient/community settings. (Prerequisites: PNM 1200, PNM 1210, PNM 1250. Satisfactory completion of Semester I requirements in the PN program sequence must be met before enrolling).

### PNM 1340 Adult Nursing

6 credits: 4 hours lecture/week - 5 hours lab/week - [Common Course Outline](#)

This course provides an introduction and exploration of adult health disorders. Principles and concepts of health and illness, pain management, and psychosocial aspects of nursing care are discussed. The importance of nursing observations and the implementation of safe and effective nursing actions are emphasized. Selected topics of system disorders include: cancer, integumentary, immune, musculo-skeletal, nervous, sensory, gastrointestinal, endocrine, respiratory, cardiovascular, blood, peripheral vascular, genitourinary, reproductive and renal disorders. This course includes clinical experiences to enhance practical understanding and treatment of disorders in the adult within the LPN scope of practice. Current CPR (Health Care Provider) certification is required. (Prerequisites: PNM 1200, PNM 1210 and PNM 1250).

### PNM 1440 Integrated Clinical Application

4 credits: 1.5 hours lecture/week - 2.5 hours lab/week - [Common Course Outline](#)

This course will assist the student in his/her transition role as a graduate practical nurse. Special topics include: nursing career opportunities, employee/employer expectations, interdisciplinary nursing practice, organizational communication, group process/team building, organizational leadership styles, licensure, professional/ethical decision-making and problem solving. This course will include an introduction to healthcare in the community, including the different roles of caregivers. Discussions will include health promotion and prevention as it relates to the individual, family and community. The clinical experience is organized using typical work hours to integrate experience with licensed team members. The student will be expected to exhibit higher levels of problem solving and critical thinking as they apply nursing actions in multiple patient assignments. Effective team membership and ethical/professional decision-making skills will be evaluated. Current CPR (Health Care Provider) certification is required. (Prerequisites: PNM 1200, PNM 1210, PNM 1250, PNM 1320, PNM 1340).

## POLITICAL SCIENCE

### POLS 1615 Introduction to American Government (MnTC 05, 09)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a survey course of American Government, with an emphasis on politics and history, the Constitution, civil liberties and rights, public opinion, interest groups, the political process, mass media, the branches of the federal government, and an overview of public policy and state and local government. A democracy requires its citizens to understand the dynamic of their political system. (Prerequisites: None).

### POLS 1619 International Relations (MnTC 05, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This is a course that covers international relations, with emphasis on foreign policy. Topics will include theory, immigration, trade, imperialism, war and peace, terrorism, national sovereignty, and world order. (Prerequisites: None).

## PSYCHOLOGY

### PSYC 1611 Psychology of Adjustment (MnTC 05, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course emphasizes personal growth and human adjustment, including topics such as personality, coping with stress, interpersonal communication, intimate relationships, careers, sexuality, and psychological disorders. College level reading and writing skills required. (Prerequisites: None).

### PSYC 1650 Evolution and Human Behavior (MnTC 05, 10)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course provides an introduction to evolutionary psychology: the scientific study of human behavior and mental processes focusing on those universal processes that evolved to solve specific survival and reproductive challenges. Topics include natural selection, sexual selection, long-term and short-term mating strategies, jealousy, family relationships, group living, cooperation, conflict, culture, and dominance. (Prerequisites: None).

PSYC 1660 Health Psychology (MnTC 05, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will examine the psychological and social factors that lead to the enhancement of physical health and the prevention and treatment of illness. (Prerequisites: College level reading and writing skills).

PSYC 2611 Social Psychology (MnTC 05, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course examines the relationship of the individual to the social environment, emphasizing group influences on individual behavior. College level reading and writing skills recommended. (Prerequisites: None).

PSYC 2618 General Psychology (MnTC 05, 07)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is an introduction to the scientific study of human behavior and mental processes. The topics covered will include research methods, the biological roots of behavior, sensation, perception, principles of learning, memory, thinking, language, intelligence, emotions, stress, personality, psychological disorders, therapy, and social psychology. College level reading and writing skills recommended. (Prerequisites: None).

PSYC 2620 Introduction to Cultural Psychology (MnTC 05, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course studies how cultural traditions and social practices regulate, express, and transform the human psyche, the influences of cultural processes and environments on a wide range of psychological topics, such as cognition, emotion, motivation, moral reasoning and mental disorders. (Prerequisites: None).

PSYC 2622 Abnormal Psychology (MnTC 05, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an analysis of abnormal behavior, covering topics such as the historical background; mood, anxiety, and schizophrenic disorders, personality disorders, substance-related disorders, neurodevelopmental disorders; causes of abnormal behavior, legal and ethical issues in the prevention and treatment of disorders; and cultural diversity of abnormal behavior. College level reading and writing skills are recommended. (Prerequisites: None).

PSYC 2626 Human Growth & Development (MnTC 05, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introduction to the scientific study of human development. It explores the universal features and individual variations of physical, cognitive, emotional, and social development from conception to death. College level reading and writing skills recommended. (Prerequisites: None).

### PSYC 2630 Statistics for the Behavioral Sciences (MnTC 05)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is an introduction to the basic procedures used in the collection and analysis of data in the behavioral sciences. Students conduct research projects based on the psychological literature, following the appropriate ethical guidelines. Statistical software is used to conduct descriptive and inferential analyses, and students select and apply statistical procedures to help answer psychological research questions. Students learn to write conclusions that are supported by statistical analyses. (Prerequisites: PSYC 2618 AND one of the following: MATH 1115, MATH 1117, MATH 1127, MATH 1128, MATH 2208, OR MATH 2350).

### PSYC 2918 General Psychology: Honors (MnTC 05, 07)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is an advanced introduction to the scientific study of behavior and mental processes. One of Phi Theta Kappa's Honors Study Topic themes will unite topics covered in a traditional general psychology course such as research methods, Nature/Nurture, Learning, Memory, Thinking, Language, Development, Intelligence, Emotions, Stress, Personality, Social Psychology, and Psychological Disorders. Through an examination of primary text and the completion of an original research project, emphasis will be placed on the critical analysis and integration of broad psychological theory as it connects to the selected theme. This course is the Honors Equivalent of PSYC 2618. (Prerequisites: INFS 2915).

## READING

### READ 0900 Introduction to College Reading

3 credits: 4 hours lecture/week - [Common Course Outline](#)

This course focuses on fluency as a tool for strengthening reading comprehension. It addresses critical reading and thinking skills necessary for the processing of college-level reading materials. Students will be actively engaged with oral reading and progress monitoring to develop fluency and comprehension. (Prerequisites: None. Other Requirements: Appropriate test score).

## RECREATION

### REC 2210 Recreation Program Leader

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to develop a philosophic recreational background with practical hands on experience for recreational event planning, promoting and managing of events and facilities. The student will develop a broad background in the foundations of recreation, administration and leisure activities for all ages. Students will have hands-on experience with planning recreational events and managing students in a class recreational setting. Completion of PHED 2270 and/or PHED 2280 is recommended. (Prerequisites: None).

### REC 2223 Outdoor Education and Recreation

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is designed to provide students an enrichment of learning through the use of different outdoor experiences. A special emphasis will be placed on practical application of outdoor education and recreational activities in the natural setting. (Prerequisites: None).

## SCIENCE EDUCATION

### SCIE 1100 Integrated Biology and Chemistry (MnTC 03)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This one semester course is designed to introduce students to key concepts in biology and chemistry using an integrated approach. The course covers basic biological and chemical terminology while emphasizing the connection between biology and chemistry in major content areas, including scientific methodology, characteristics of life, chemical structure of biological molecules, cell structure and function, chemical reactions and metabolism, genetics, and biotechnology. (Prerequisites: None).

### SCIE 1200 Integrated Earth Science and Physics (MnTC 03)

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This one semester course is designed to introduce students to key concepts in earth science and physics using an integrated approach. The course covers basic concepts and terminology while emphasizing the connection between earth science and physics in major content areas which include earth and space, motion and force, energy, waves, meteorology and climate, earth materials, electricity, and sources and production of energy.

## SOCIOLOGY

### SOC 1612 Sex and Gender in Society (MnTC 05, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introduction to both the biological and cultural aspects of human sexuality and gender in society. Lectures, readings, discussions, and films will address sexuality research and theory, gender roles, diversity, sexual behavior, sexual development, conception and contraception, variation, socialization, cultural influences and attitudes. (Prerequisites: None).

### SOC 1614 Introduction to Sociology (MnTC 05, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is an introduction to the process of applying a sociological perspective to understanding the social world including patterns of behavior and interaction, culture, socialization, social structure, globalization, groups and organizations, deviance, social stratification, institutions and social change. College level reading and writing skills are recommended. (Prerequisites: None).

### SOC 1616 Social Problems (MnTC 05, 09)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a sociological analysis of the nature, causes and possible responses to a variety of contemporary and future American and global social problems. These include problems associated with individual and group deviance, inequality and exploitation, social change, institutional dysfunction and international and global conflict. (Prerequisites: None).

### SOC 1618 Environmental Sociology (MnTC 05, 10)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a sociological analysis of the relationship between social behavior the social and natural environment within which humans live. The course applies a sociological approach to describe, explain, and develop responses to current and potential problems in the environment. College level reading and writing skills are recommended. (Prerequisites: None).

### SOC 2612 Marriage and the Family Across the Life Span (MnTC 05, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course involves a sociological analysis of historical and contemporary patterns and trends in family life including dating, marriage, parenting, divorce and remarriage, and family dysfunction. College level reading and writing skills are recommended. (Prerequisites: None).

### SOC 2614 Sociology of Health, Illness, and Health Care

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course uses the sociological perspective to examine the role of the social environment in health, illness, and health care systems. Historical and contemporary issues relating to medicine, health, and illness are studied along with the diverse ways in which social categories such as gender, race, ethnicity, and social class affect health, illness, and medical care. College level reading and writing skills are recommended. (Prerequisites: SOC 1614).

### SOC 2625 Minority Group Relations (MnTC 05, 07)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course examines the social interaction of ethnic and cultural groups in the United States. Topics include prejudice, discrimination, class and caste, stereotyping, ethnocentrism, segregation, assimilation, amalgamation, conflict and various proposals for responding to minority status. A special emphasis on the effects of institutions on majority- minority relations. College level reading and writing skills are recommended. (Prerequisites: None).



## SPANISH

### SPAN 1001 Introduction to Hispanic Cultures (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is a comparative study of Hispanic cultures and societies exploring geographical, historical, socio-economic, political and religious issues, as well as the regional customs and interpersonal relations of the Hispanic world. Because these courses are taught in English (may include basic Spanish expressions), they are particularly suitable for students who have never studied a foreign language. (Prerequisite: None).

### SPAN 1101 Beginning Spanish I (MnTC 06, 08)

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course is an introduction to Spanish language and culture within the context of daily life in Spanish-speaking regions worldwide. Communication skills include speaking, listening, reading and writing. Sensitivity to cultural differences is emphasized. Designed for the student with NO previous foreign language study. (Prerequisites: None).

**SPAN 1102 Beginning Spanish II (MnTC 06, 08)**

4 credits: 4 hours lecture/week - [Common Course Outline](#)

SPAN 1102 is a continuation of SPAN 1101. This course focuses upon the "Novice 2" learning level of Spanish language and culture within the context of daily life in Spanish-speaking regions worldwide. Communication skills include "Novice 2" level: speaking, listening, reading and writing. Sensitivity to cultural differences is emphasized. Two years of high school Spanish is preferred. (Prerequisites: SPAN 1101).

**SPAN 1130 Introductory Medical Spanish (MnTC 06, 08)**

3 credits: 3 hours lecture/week - [Common Course Outline](#)

The unique circumstances for health care workers in providing effective treatment can often be difficult due to communication barriers. This course provides a basic background in conversational Spanish to allow medical health care personnel to improve communication with their Spanish-speaking patients. Although students will be advised on how to work with an interpreter, this beginning course does not train the health care professional to assume the role of an interpreter. Students that have completed one year of high school Spanish should contact the instructor regarding permission to enroll. (Prerequisite: SPAN 1101).

**SPAN 2101 Intermediate Spanish I (MnTC 06, 08)**

4 credits: 4 hours lecture/week - [Common Course Outline](#)

Spanish 2101 is an Intermediate I Spanish Language course designed to strengthen language skills and develop cultural competency. SPAN 2101 is a communicative approach to reading, writing, listening, and speaking Spanish. Short literary forms (poetry, drama, music, film from Spain and the Americas) and other authentic texts form the basis for language interpretation, development, and practice. Three years of high school Spanish with grade of B or higher is preferred. (Prerequisites: SPAN 1102).

**SPAN 2102 Intermediate Spanish II (MnTC 06, 08)**

4 credits: 4 hours lecture/week - [Common Course Outline](#)

Spanish 2102 is an Intermediate II Spanish Language course designed to strengthen language skills and develop a more complex cultural competency. SPAN 2102 is a continuation of SPAN 2101 and takes a more complex communicative approach to reading, writing, listening, and speaking Spanish. Short literary forms (poetry, drama, music, film from Spain and the Americas) and other authentic texts form the basis for language interpretation, development, and practice. (Prerequisites: SPAN 2101. Other Requirements: CLEP exam or 4 Years of High School Spanish may substitute for SPAN 2101 prerequisite).

**SPAN 2111 Intermediate Spanish Conversation**

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is designed to increase vocabulary and develop oral skills through systematically guided conversation and dialogue concerning such possible topics as daily life, family, hobbies/recreation, education systems, and food, travel and current events. Students that have complete two years of high school Spanish with Bs or better may contact the instructor concerning permission to enroll in the course. (Prerequisites: SPAN 1101).



## SUPERVISORY MANAGEMENT

### SMGT 1115 Strategies for Personal Leadership

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces students to the foundational concepts of personal leadership. The ability of the student to identify their personal leadership qualities and then apply these to their role are core elements in becoming a successful leader and supervisor in the workplace. Topics covered in the course include the following: identifying personal strengths and behavioral tendencies, interpersonal oral communication skills, priority management, and mindfulness practices. As a result of this course, students will develop a personal leadership philosophy and learn to increase personal and professional leadership effectiveness. (Prerequisites: None).

### SMGT 1125 Leadership Development and Ethics

3 credits: 3 hours lecture/week - [Common Course Outline](#)

In this course, students will learn leadership concepts and tools to enhance their ability to motivate and positively influence others. Emphasis will be placed on creating positive and powerful relationships based on principles, values, and ethics. Additionally, students will learn strategies to identify and deal with ethical issues that supervisors may encounter in the workplace. (Prerequisites: None).

### SMGT 1137 Leading Innovation and Change

3 credits: 3 hours lecture/week - [Common Course Outline](#)

The 21st Century workplace demands leaders who respond to the ever-changing needs of the global work environment. This course will provide learners with tools and techniques that are essential in keeping pace with the rapid and dramatic changes taking place in the today's workplace. Students will learn to lead effectively and to identify and overcome resistance to change by creating a work environment where change and innovation is expected and viewed as positive. (Prerequisites: None).

### SMGT 1217 Foundations of Quality

3 credits: 3 hours lecture/week - [Common Course Outline](#)

In today's global environment, providing high quality products and services are essential for organizational success. This course provides leaders with the foundation of quality management systems and the tools necessary to implement a Plan Do Check Act cycle and successful quality management system. Students will learn to identify customer and organizational needs, establish key performance indicators, and apply tools and techniques for improving systems and processes. (Prerequisites: None).

### SMGT 1221 Decision Making and Problem Solving

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course will teach participants the skills and resources needed to define and resolve organizational problems and to make decisions by using the right tools and processes to achieve quality and continuous improvement. Students will learn to conduct a root cause analysis, develop and implement solutions, and assure solutions are effective. Special attention will be given to the role of creativity and problem-solving as well as the importance of using multiple perspectives and communication in the problem-solving cycle. (Prerequisites: None).

### SMGT 1225 Team Building and Facilitation Skills

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course focuses on strategies to build and lead effective work teams. Students will learn tools and techniques in building strong teams, leading and facilitating productive meetings, and resolving conflicts. Focus will be placed on how to build and maintain synergism in relationships among work groups and internal partnerships as well as learning the practical application of skills necessary for a supervisor to plan, prepare, conduct, and evaluate productive meetings. (Prerequisites: None).

### SMGT 1327 Managing Employee Performance and Conflict

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Today's workplace demands employees exceed expectations. This course covers techniques for setting, monitoring, and improving employee performance and the link between effective performance feedback and employee retention. Students will learn procedures for setting performance standards, measuring results, and discussing employee performance. In addition, students will explore skills necessary for conducting an effective performance review including how to plan for a performance review meeting, develop a performance improvement plan, provide for periodic progress reviews and practice interim coaching skills. (Prerequisites: None).

### SMGT 1352 Employee Recruiting, Retention and Employee Development

4 credits: 4 hours lecture/week - [Common Course Outline](#)

This course provides students with the skills and strategies necessary to recruit, retain and develop employees in an increasingly diverse workforce. Emphasis will be on recruitment strategies and employee development using effective adult learning techniques, and transferring the training to the workplace. (Prerequisites: None).

## SMGT 1420 Documentation and Written Communication Skills for Supervisors

1 credits: 1 hour lecture/week - [Common Course Outline](#)

This course is specifically designed to provide students with the skills necessary for supervisors to effectively and accurately document performance and communicate with employees using a variety of written formats. The course will emphasize the importance of determining: who, what, why, where, when, and how in written communications to clearly communicate understanding of important information to employees. Typical situations for supervisors requiring course learning objectives include providing performance feedback, documenting a safety or discipline incident, giving precise directions, or preparing a formal report. Recommended entry skills/knowledge: Reading and writing at the college level. (Prerequisites: None).

## SURGICAL TECHNOLOGY

### ST 2110 Surgical Technology Medications and Microbiology

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to provide comprehensive knowledge of many classifications of drugs, routes of administration, effects, and side effects of drugs used in surgery. This course also will provide an opportunity to learn about natural body defense mechanisms and of the methods by which infectious diseases are transmitted, recognized, prevented, and treated. (Prerequisites: None).

### ST 2120 Operating Room Techniques I

5 credits: 3 hours lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course covers the fundamental skills necessary to work in the operating room and related areas. Emphasis is on aseptic technique, surgical conscience, scrub and assistant circulator roles, equipment, supplies, instrumentation, hazard preparedness, legalities, patient death, and teamwork in the perioperative process of the patient. (Prerequisites: None.)

### ST 2121 Operating Room Techniques II

5 credits: 3 hours lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course covers knowledge on effective communication, conflict resolution and teamwork in the perioperative process. Emphasis will be on skin prep, positioning, instrument set-ups, draping, minimally invasive, robotics, general surgery procedures, lasers, obstetrics, pediatrics and ear surgery. (Prerequisites: ST 2120).

### ST 2122 Introduction to the Operating Room

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course covers surgical procedures performed in orthopedic and eye specialties. It includes an introduction to clinical experience where the scrub and assistant circulator roles are practiced. (Prerequisites: ST 2110 and ST 2121).

### ST 2123 Surgical Procedures I

9 credits: 2 hours lecture/week - 14 hours lab/week - [Common Course Outline](#)

This course combines classroom and clinical experience with a focus on procedures in neurosurgery, cardiovascular, peripheral vascular, interventional radiology, plastics, and transplantation. In clinical, scrubber and assistant circulating duties are practiced. (Prerequisites: ST 2122).

### ST 2124 Surgical Procedures II

9 credits: 2 hours lecture/week - 14 hours lab/week - [Common Course Outline](#)

This course combines classroom and clinical experience with a focus on procedures in thoracic, nose, throat, oral, gynecology and genitourinary surgery. In clinical, scrubber and assistant circulating duties are practiced. (Prerequisites: ST 2122).



## STUDY SKILLS

### STSK 1670 College Study Skills

2 credits: 2 hours lecture/week - [Common Course Outline](#)

This course is designed to assist students in understanding the culture of higher education and developing effective learning and study strategies for college-level coursework. Skills that will be explored and practiced include note-taking, organization, test-taking, test anxiety management, textbook processing, basic keys to online learning, and D2L Brightspace training. College level reading skills as demonstrated by the appropriate RCTC placement test score. (Prerequisites: READ 0900).

## THEATRE

### THTR 1121 Beginning Acting (MnTC 06)

3 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is an entry level course to study and practice the art of acting. The student will learn the art and craft of acting through analyzing one's own performances and performances of others. Other areas studied are written observations, monologue and scene study, improvisation, body movement, rhythms and vocalizations in the process of creating three dimensional characters for the stage. College level reading and writing skills recommended. (Prerequisites: None).

### THTR 1134 Theatre Appreciation (MnTC 06, 08)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course is designed to help increase the awareness and understanding of a theatre production and the steps involved in preparing a play for performance. Topics include training and responsibility of the playwright, director, actor, and designer as well as the historical and cultural influences of European and Asian theatre on the development of American theatre. College level reading and writing skills recommended. (Prerequisites: None).

### THTR 1135 Stagecraft (MnTC 06)

3 credits: 3 hours lecture/week - [Common Course Outline](#)

Stagecraft is an introduction to the technical aspects of theatre. These include set construction, painting, costume and lighting, properties, special effects, drafting, and scene design. Special attention is paid to basic shop tools and safety. Participation in the current theatre production is required. (Prerequisites: None).

### THTR 2121 Intermediate Acting

3 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course continues where THTR 1121 Beginning Acting leaves off. Intermediate acting introduces the student to a deeper understanding of the theories and approaches used to create characters physically, vocally, emotionally, and mentally. The students in the class work together to develop scenes that require them to analyze and make choices for performance based on cultural issues, diversity and historical relevance, and style of the literature chosen. (Prerequisites: THTR 1121 or permission of instructor).

## VETERINARY TECHNICIAN

### VT 1010 Veterinary Medical Terminology and Anatomy

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course will introduce the building of medical words including prefixes, suffixes, and combining forms of commonly used terminology in the veterinary medical field. Word part definitions, abbreviations, spelling, and pronunciation, along with a basic knowledge of word construction are taught. Emphasis is on the structure and function of the anatomical systems of common domestic animals. The anatomy of the digestive, skeletal, dermal, cardiovascular and neurologic systems will be emphasized. College level reading, writing and math skills are required in this course. (Prerequisites: None. Other Requirements: College level reading and writing).

### VT 1110 Introduction to Veterinary Technology

3 credits: 3 hours lecture/week - [Common Course Outline](#)

This course introduces the student to the profession of veterinary medicine and the members of the veterinary health care team. Topics of the course include veterinary law and ethics, career opportunities, professionalism, occupational safety, the role of animals in society, human- animal bonds, pet loss, and euthanasia. (Prerequisites: READ 0800 or equivalent).

### VT 1220 Small Animal Nursing Techniques I

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course will introduce concepts of hospital animal care and record maintenance. Techniques emphasized will include history taking, initial physical examination, bathing, grooming, nail trimming, dermatological examination and application of topical medications, animal restraint, and preventive medicine. This course focuses on handling and restraint as well as basic administration of medication skills. Attendance is required for successful completion of the course. To enroll in the course, all previous required courses must have been completed with a C or better. (Prerequisites: VT 1010, VT 1110, CHEM 1117).

### VT 1410 Veterinary Surgical Nursing and Anesthesia

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is designed to give students a foundation in the principles of routine veterinary surgical assisting. Emphases will include instrumentation, aseptic technique, surgical support equipment, proficiency in the proper preparation of the operating room and general nursing care. The course will also cover basic anesthetic principles and monitoring. Attendance is required. To enroll in the course a grade of C or better is required for previously required courses. (Prerequisites: BIOL1220, VT 1220, VT 2020, VT 2910).

### VT 1510 Veterinary Office Procedures

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course introduces common business procedures used in veterinary practice such as bill collection, appointment scheduling, telephone techniques, record keeping, merchandising, and supervision of employees. The course includes follow-up and discharge procedures, filing and record retention, and using the computer in veterinary medicine. This is meant to serve as an overview of veterinary practice management including veterinary marketing, staff responsibilities, interoffice communications, and public relation techniques. Topics include advanced office procedures with emphasis on client relations and education, inventory management, leadership skills, and state and federal regulations governing veterinary practices and computer applications in veterinary medicine. To enroll in this course, all previous required courses must have been completed with a C or better. Admission to the Veterinary Technical Program. (Prerequisites: Grade of C or better in MATH 1026).

### VT 1610 Diagnostic Imaging

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This is a lecture and laboratory course covering the practical and theoretical aspects of diagnostic imaging in veterinary medicine. This course covers basic principles of x-ray physics, radiation safety, radiographic equipment and accessories, patient positioning, and legal requirements. The course will also include practical application of proper positioning to obtain diagnostic quality radiographs. In addition to routine radiography, the following topics will be included: trouble shooting radiographic quality, use of contrast media, sonography, dental radiography, special imaging techniques and development of a radiographic technique charts. All prior veterinary technician courses should be completed with a grade of C or better. (Prerequisites: VT 1410, VT 1710, VT 1810, and VT 2900. Other Requirements: None).

### VT 1710 Introduction to Veterinary Technology Field Experience

2 credits: 6.25 hours lab/week - [Common Course Outline](#)

This course allows students to participate as a Veterinary Staff member in a part-time, four- six week off-campus learning experience in business, industry, and/or the public sector. The student is involved in the day-to-day work of the facility, including restraint and handling of animals, office procedures, clinical laboratory techniques, and surgery preparation. To enroll in the course an overall GPA of 2.0 is required for previously required courses. (Prerequisites: BIOL 1220, VT 1220, VT 1510, VT 2020, VT 2910).

### VT 1810 Parasitology

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course will introduce the student to the clinical laboratory, microscopes and other equipment. Basic laboratory procedures will be emphasized. Fecal identification techniques, life cycles, nomenclature, modes of transmission, geographical distribution and diseases associated with external parasites of small animals, horses and cattle will be discussed. Internal parasites of domestic animals will be taught and identified in this course. Attendance is required for successful completion of the course. To enroll in the course on overall GPA of 2.0 is required for previously required courses. (Prerequisites: BIOL 1220, VT 1220, VT 1510, VT 1900, VT 2020, VT 2910).

### VT 1900 Small Animal Care and Management

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course will introduce concepts of animal care and kennel management. This course focuses on handling and restraint, safety, regulations and equipment of animal facilities and kennels management of domestic species. The course aims to distinguish normal small animal behavior and animal husbandry. Hands on animal care duties and teamwork will be incorporated into this course. Attendance is required for successful completion of this course. To enroll in this course, all previous required courses must have been completed with an overall GPA of 2.0 or better. (Prerequisites: CHEM 1101, COMM 1114 or ENGL 1117, MATH 1026, VT 1010, VT 1110).

### VT 2020 Comparative Veterinary Anatomy and Physiology

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course provides additional detail in anatomy and physiology of companion and farm animal species. Focuses are on the anatomical structures, and basic physiological body function differences between selected species. Additional topics include the interrelationships between body systems such as respiratory, cardiovascular, urogenital, endocrine, digestive, nervous and reproductive systems. Other subjects include organs of special sense anatomy and anatomy and physiology of bones, muscles, and skin, metabolism and digestion, acid-base balance, endocrinology, and reproductive endocrinology and unique characteristics of common domestic species. Lab includes skeletons and cadaver specimens. Attendance is required for successful completion of the course. (Prerequisites: Grade of C or better in MATH 1026 and Admission into the Veterinary Technician Program).

### VT 2230 Small Animal Nursing Techniques II

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course is a continuation of the nursing skills and techniques begun in Small Animal Nursing Techniques I. This course will introduce concepts of a specialized physical examination, intravenous injection techniques, and preventive medicine. This course provides for practical experience in performing specific skills involved with animal nursing. Attendance is required for successful completion of the course. To enroll in the course, all previous required courses must have been completed with a C or better. (Prerequisites: VT 1410, VT 1710, VT 1810, VT 2900).

### VT 2240 Small Animal Nursing Techniques III

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This is a clinical laboratory course for veterinary technicians. Students will gain the knowledge and skills necessary to perform the various types of tests that are usually done in the clinical laboratory of a veterinary hospital. Topics will include; blood collection, CBC, WBC, blood film evaluation, leukocyte evaluation, urinalysis, and blood parasites. Attendance is required for successful completion of the course. (Prerequisites: VT 1410, VT 1710, VT 1810, VT 2900. Other Requirements: To enroll in the course, all previous required courses must have been completed with a C or better).



### VT 2250 Large Animal Procedures

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course introduces the livestock and equine industry and the various species of large animal livestock. This includes livestock terminology, breeds, production systems, basic management practices, preventive medicine, lameness examinations and conditions, necropsy procedures and animal products and by-products. Techniques covered will include restraint, behavior, and medical and surgical nursing procedures of large animals and equine. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: High School diploma or GED Grade of C or better (high school or college level within the last five years) in the following courses: Biology with a lab, Chemistry with a lab, Elementary Algebra of equivalent Minimum one-year high school typing/keyboarding skills. Completion of all previous VT courses with a C or better. (Prerequisites: None).

### VT 2260 Veterinary Surgical Nursing II

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course will cover pre-surgery preparation and post-surgical care of small animals, principles of surgery, aseptic technique, fluid therapy, and surgical assisting through practical experience. The course applies basic utilization of anesthetic agents, the use and operation of allied machines, monitoring and care of the anesthetized animal patient, and the pre-operative considerations and duties for anesthesia. Other topics include emergency procedures and control of post-surgical pain as well as overall pain management. To enroll in the course, all previous required courses must have been completed with a C or better. (Prerequisites: VT 1410, VT 1710, VT 2900, VT 1810).

### VT 2270 Laboratory Animal Care and Management

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This course introduces the care and management of common laboratory species, avian, reptile, and exotic pets. Discussion will include husbandry, animal behavior, nutrition, identification, restraint, common clinical conditions, nursing procedures, and preventive health care. Presents the fields of laboratory research and zoological medicine. Exotic and laboratory animals are introduced to allow hands-on experiences. Field trips included. To enroll in this course, all previous required courses must have been completed with a C or better. (Prerequisites: VT 1410, 1710, 1810, 2900).

### VT 2360 Veterinary Dentistry

1 credit: 2 hours lab/week - [Common Course Outline](#)

This course will teach the foundations of veterinary dentistry including oral health assessments and treatments, client education, and radiographic techniques. The course will also provide a review of anesthesia and pain management as it applies to dentistry. (Prerequisites: VT 1410, VT 1610, VT 2230, VT 2820) (Other requirements: C or better in all previously required Veterinary Technician program courses.)

#### VT 2720 Veterinary Technician Field Experience

4 credits: 20 hours lab/week - [Common Course Outline](#)

Students participate as veterinary technicians in a full-time 8 week off-campus learning experience in business, industry, and/or the public sector. The student is involved in the day-to-day work of the facility, including restraint and handling of animals, office procedures, clinical laboratory techniques, radiology, and surgery preparation. This course incorporates an on-line review workshop for students to review material studied during their education. To enroll in this course, all previous required courses must have been completed with a C or better. (Prerequisites: VT 1610, VT 2270, VT 2820, VT 2920).

#### VT 2820 Clinical Laboratory Techniques I

3 credits: 1 hour lecture/week - 4 hours lab/week - [Common Course Outline](#)

This is an advanced clinical laboratory course for veterinary technicians. Students will gain the knowledge and skills necessary to perform the various types of tests that are usually done in the clinical laboratory of a veterinary hospital. Topics will include; blood collection, CBC, WBC, blood film evaluation, leukocyte evaluation, coagulation testing, urinalysis, blood chemistries and blood parasites. Attendance is required for successful completion of the course. To enroll in the course, all previous required courses must have been completed with a C or better. (Prerequisites: VT 1410, VT 1710, VT 1810, VT 2900).

#### VT 2830 Clinical Lab Techniques II

3 credits: 2 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course is the summation of the laboratory skills and techniques needed by the veterinary technician. Application of microbiological application as used by veterinary technicians is covered. Cytology, serology testing and semen analysis techniques, are also covered. This course includes a hands-on situations covering all laboratory procedures as mentioned previously. Participation is required for successful completion of this course. (Prerequisites: VT 1610, VT 2230, VT 2270, VT 2820, VT 2920. Other Requirements: To enroll in this course, all previous required courses must have been completed with an overall GPA of 2.0).

#### VT 2900 Kennel Management and Nutrition

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course will introduce principles of nutrition and advanced animal care duties. This course will provide further opportunities for kennel management of domestic animals while incorporating knowledge of proper nutrition and feeding of the dog and cat. Hands on animal care duties and teamwork and emphasized throughout the course. Attendance is required for successful completion of the course. All previous required courses must have been completed with a C or better. (Prerequisites: BIOL 1220, VT 1220, VT 2020, VT 2910).

#### VT 2910 Pharmacology and Disease for Veterinary Technicians

4 credits: 3 hours lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course provides background in veterinary pharmacologic principles and management. Topics of focus include common drug terminology, classifications of drugs, such as antibiotics and anesthetics, and mechanisms of drug action, the diseases common to our domestic species along with the pharmacological agents that are used to treat them. Basic skills and management of the veterinary pharmacy are also covered. RECOMMENDED ENTRY SKILLS/KNOWLEDGE: High School diploma or GED. Grade of C or better (high school or college level within the last five years) in the following courses: Biology with a lab, Chemistry with a lab, Elementary Algebra of equivalent Minimum one-year high school typing/keyboarding skills. Admission into the Veterinary Technician program. (Prerequisites: Grade of C or better in MATH 1026).

#### VT 2920 Small Animal Disease and Diagnostics

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course surveys infectious and noninfectious diseases of domestic animals. The content includes aspects of disease such as etiology, clinical signs, treatment, prevention, and pathology. Animal health care and preventative disease procedures will be implemented. Principles of the disease process, epidemiology, zoonoses, public health significance as well as behavior management will be emphasized. Attendance is required for successful completion of the course. To enroll in the course an overall GPA of 2.0 is required for previously required courses. (Prerequisites: VT 1410, VT 2900, VT 1710, VT 1810. Other Requirements: To enroll in the course an overall GPA of 2.0 is required for previously required courses).

#### VT 2930 Applied Pharmacology and Nutrition

2 credits: 1 hour lecture/week - 2 hours lab/week - [Common Course Outline](#)

This course will introduce the regulations controlling the use of biological and pharmaceuticals in the management of animal disease. Additional topics will include rationale and precautions for therapeutic use of pharmaceutical with an applied approach. Emphasis will be on teamwork, communication, preventive health care and health problem assessments, and clinical nutrition. This course will include advanced animal nutrition and the concepts of clinical nutrition. Dietary management of various nutritional diseases for small animals will be explored. Attendance is required for successful completion of this course. (Prerequisites: VT 2230, VT 1710, VT 1610, VT 2920. Other Requirements: To enroll in this course, all previous required courses must have been completed with an overall GPA of 2.0).

## WELDING TECHNOLOGY

### WELD 1001 Blueprint Reading, Process Theory and Safety

4 credits: 2 hours lecture/week - 4 hours lab/week - [Common Course Outline](#)

The students will work on an overview of blueprint reading including the understanding of notes, specifications, and identification of welding symbols. Students will use relevant math strategies to solve practical problems they will encounter in actual shop situations. An introduction of processes used in fabrication shops will be outlined. Students will be introduced to the different processes of welding and the welding trade. The students will cover bonding, fusion, proper heat usage, heat distortion and its effect on base metal. Students will learn electrical current and voltage circuits from welding equipment to base metal, reverse current, and voltage along with AC welding. Students will make minor repair to welding equipment and tools in the trade. Major components stressed are safe practices used in welding profession, safe usage of welding equipment, PPE (personal protection equipment) and how to eliminate unsafe conditions. This is a co-requisite course to be taken with WELD 1002 and WELD 1003. (Prerequisites: None).

### WELD 1002 SMAW-Shielded Metal Arc Welding

3 credits: 6 hours lab/week - [Common Course Outline](#)

This course introduces students to Shielded Metal Arc Welding (SMAW) including equipment, terms, and related safety procedures. Student will learn the safe and correct set up of all SMAW related welding equipment. Student will demonstrate proper electrode selection and use based on metal type and thicknesses. Student will perform basic SMAW welds on selected joints in all positions and will perform visual inspection of these welds to understand what an acceptable weld is. This is a co-requisite course to be taken with WELD 1001 and WELD 1003. (Prerequisites: None).

### WELD 1003 Oxy-Fuel Welding, Cutting and Braze Welding

1 credits: 2 hours lab/week - [Common Course Outline](#)

This course is designed to show the student the safe operation of Oxy-Fuel cutting and welding equipment. Students will learn the proper way to maintain high pressure gas cylinders, hoses, and regulators. Students will demonstrate safely operating the torch to weld and cut various thicknesses of metal in the flat position. This is a co-requisite course to be taken with WELD 1001 and WELD 1002. (Prerequisites: None).

#### WELD 1004 GMAW-Gas Metal Arc Welding

3 credits: 6 hours lab/week - [Common Course Outline](#)

Students will study the fundamentals and safety concerns of the GMAW process. Within this course students will learn about GMAW power sources, shielding gasses, methods of transfer and electrode selection. Students will demonstrate the proper PPE and safety concerns needed for the GMAW process. Students will perform basic GMAW welds in all positions and perform visual inspection of these welds to understand what an acceptable weld is. (Prerequisites: None).

#### WELD 1005 GTAW-Gas Tungsten Arc Welding

3 credits: 6 hours lab/week - [Common Course Outline](#)

Students will study the fundamentals and safety concerns of the GTAW process. Within this course students will learn about GTAW power sources, shielding gasses, electrode, and filler metal selection. Students will demonstrate the proper PPE and safety concerns needed for the GTAW process. Students will perform basic GTAW welds in all positions and perform visual inspection of these welds to understand what an acceptable weld is. (Prerequisites: None).

#### WELD 1006 Welding Internship

2 credits: 5 hours lab/week - [Common Course Outline](#)

This course is designed to provide the student with a purposeful occupational experience in the welding and fabrication field. Each internship experience is individualized. A training plan is created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program. One credit of Internship is equal to 80 total hours of on-the-job training (2 weeks). (Prerequisites: Completion of WELD 1001, WELD 1002, WELD 1003, WELD 1004 and WELD 1005 with a letter grade of C or above).

## FACULTY AND ADMINISTRATION ROCHESTER COMMUNITY AND TECHNICAL COLLEGE

<b>Anderson, Kari</b>			<b>Cafilisch, Annette</b>		
<b>Chemistry</b>			<b>Associate Dean of Nursing</b>		
BA	Chemistry, General	Saint Olaf College	AS	Nursing	Rochester Community and Technical College
MS	Biochemistry	University of Michigan	BSN	Nursing	Graceland College
			MSN	Nursing	University of Phoenix
			Edd	Education	Argosy University
<b>Arneson, Shelli</b>			<b>Casper, Gerald</b>		
<b>Human Services</b>			<b>Communication Studies</b>		
BA	Sociology, General	Simpson College	BA	Communication/Theatre	Fort Hays State University
MS	Health Science	Mankato State University	MS	Communication/Theatre	Fort Hays State University
<b>Atwood, David</b>			<b>Casper, Ruth</b>		
<b>Mathematics</b>			<b>Psychology</b>		
BS	Mathematics	University of New York - Plattsburg	BA	Psychology and Communication	Fort Hays State University
MS	Mathematics: Statistics Option	Mankato State University	MS	Psychology (Clinical)	Fort Hays State University
			PhD	Psychology (Social)	University of Nebraska - Lincoln
<b>Baker, Mary</b>			<b>Chew, Stacy</b>		
<b>Nursing Assistant</b>			<b>Nursing</b>		
AA	Nursing	Rochester Community and Technical College	BSN	Nursing	Samuel Merritt College
			MSN	Nursing	Winona State University
<b>Banker, Robert</b>			<b>Clement, Annie</b>		
<b>Art</b>			<b>Communication Studies</b>		
AAS	Architectural Technology	Ithaca College	BA	Communication & Theatre	South Dakota State University
BFA	Fine/Studio Arts	Alfred University-Alfred, New York	MS	Communication Studies	South Dakota State University
MFA	Art	University of Minnesota			
<b>Benson, Pamela</b>			<b>Cochran, Michelle</b>		
<b>Computer Aided Drafting</b>			<b>Reading</b>		
Diploma	Precision Manufacturing Technology	Rochester Community and Technical College	BA	Art Saint Norbert College	
AS	Engineering	Rochester Community and Technical College	GC	Literacy Education	St. Mary's University – Winona, MN
BAS	Technology Management	Bemidji State University	MEd	Teaching and Learning	St. Mary's University – Winona, MN
MS	Industrial Technology/Career and Technical Education	Bemidji State University			
<b>Bjorkley-Campbell, Kerri</b>			<b>Cole, Steven</b>		
<b>Nursing</b>			<b>Biology</b>		
AS	Nursing	Rochester Community and Technical College	BA	Biology/Chemistry	Westmar College
BSN	Nursing	Augsburg College	MA	Biology/Chemistry	University of South Dakota – Vermillion
MS	Nursing Education	Winona State University	MNS	Biology/Life Science	University of South Dakota – Vermillion
<b>Blake, Alan</b>			<b>Condit, Kevin</b>		
<b>Facility and Service Technology</b>			<b>Art</b>		
AAS	Building Utilities Mechanic	Rochester Community and Technical College	BS	Art Teacher Education	Moorhead State University
BA	Special Education	Augsburg University	MA	Studio Arts, Graphic Design	Mankato State University
			MFA	Studio Arts, Interactive Design	University of Minnesota – Twin Cities
<b>Boyd, Jeffery</b>			<b>Costello, Patrick</b>		
<b>President</b>			<b>English</b>		
AA	Criminal Justice	San Joaquin Delta College – Stockton, CA	BA	English	Saint Mary's University
BA	Human Services	Judson University – Elgin, IL	MA	English	Winona State University
MEd	Education; Adult Education	University of Phoenix, Phoenix, AZ			
Edd	Community College Leadership	National Louis University – Chicago, IL			
<b>Brown, Teresa</b>			<b>Dahling, Sara</b>		
<b>Vice President of Student Affairs</b>			<b>Nursing</b>		
BS	Chemistry, General	South Dakota State University	BSN	Nursing Practice	Bethel University
PhD	Chemistry	South Dakota State University	MSN	Nursing Education	Bethel University
<b>Bruce, Jennifer</b>			<b>Davis, Aaron</b>		
<b>Library</b>			<b>Carpentry</b>		
AA	Associate of Arts	Central Lakes College	Diploma	Carpentry	Rochester Community and Technical College
BA	Psychology/Info Media	Saint Cloud State University	AAS	Mechanical Design Technology	North Iowa Area Community College
MLS	Library Science	University of Wisconsin – Madison	AA	Mechanical Design Technology	North Iowa Area Community College
			BA	Technology Education	University of Northern Iowa
<b>Buchl, John</b>			<b>Dennison, Mary</b>		
<b>Mathematics</b>			<b>Library</b>		
BS	Mathematics	University of North Dakota	BA	European History	University of California – Los Angeles
MEd	Mathematics	University of North Dakota	MLS	Library Science	University of Michigan – Ann Arbor
			MS	Special Education	Winona State University
<b>Buck, Kristin</b>			<b>Dimian, Atef</b>		
<b>English</b>			<b>Political Science</b>		
BA	English Language/Literature General	Suny at Stony Brook – Stony Brook, NY	BA	Political Science	University of Minnesota – Duluth
MA	English Language/Literature General	University of Delaware	MA	Political Science/Govern.	Mankato State University
<b>Durand, Matt</b>			<b>Interim Dean of Career, Technical, Business and Workforce Education/Foundation Director</b>		
			Diploma	Carpentry	Rochester Community and Technical College
			BS	Construction Management	Minnesota State University, Mankato
			MS	Educational Leadership	Minnesota State University, Mankato

## FACULTY AND ADMINISTRATION ROCHESTER COMMUNITY AND TECHNICAL COLLEGE

<b>Endel, Sarah</b>			<b>Halverson-Wente, Lori</b>		
<b>Mathematics</b>			<b>Communication Studies</b>		
BS	Secondary Math Education	Missouri State University	BA	Speech Communication and Political Science	University of Minnesota – Morris
MSC	Mathematics	University of Central Missouri	MA	Communication Studies	Northern Illinois University
<b>England, Leanne</b>			<b>Hammill, Tara</b>		
<b>Nursing</b>			<b>Healthcare Office Professional</b>		
BSN	Nursing	University of Western Ontario	AAS	Medical Secretary	Rochester Community and Technical College
MSC	Nurse Educator	Winona State University	BA	Business Technology, Leadership and Education	Metropolitan State University
<b>Finseth, Onalee</b>			<b>Harding, Mike</b>		
<b>Nursing</b>			<b>Automotive Technician</b>		
ADN	Nursing	Rochester Community and Technical College	DIPLO	Automobile Mechanic	Riverland Technical College
BSN	Nursing	Augsburg College	DIPLO	Automotive Diagnostic Tech	Alexandria Technical College
MSN	Nursing Education	Viterbo College			
GC	Family Nurse Practitioner	Winona State University			
EDD	Higher Education Administration	St. Cloud State University			
<b>Finseth, Wayne</b>			<b>Hill, Theresa</b>		
<b>Alcohol and Drug Counseling</b>			<b>Chemistry</b>		
BA	Psychology	Winona State University	BS	Chemistry	University of North Dakota
MS	Community Counselor Education	Winona State University	PhD	Chemistry	University of North Dakota
EDD	Educational Leadership	Minnesota State University - Mankato			
<b>Finstuen, Jodie</b>			<b>Hodson, William</b>		
<b>Surgical Technology</b>			<b>Vice President of Human Resources</b>		
AAS	Surgical Technology	Rochester Community and Technical College	AA	General Studies	Moorpark College
			BA	Psychology	California State University – Northridge
			MPA	Non-Profit/Public/ Organization Management	Indiana University - Bloomington
<b>Flaig Prinsen, Bonnie</b>			<b>Hoth, Jean</b>		
<b>English</b>			<b>Sociology</b>		
BA	English	Mankato State University	BA	Political Science	University of Northern Iowa
MA	English	Mankato State University	MA	Sociology	University of Northern Iowa
<b>Frame, Brenda</b>			<b>Houg, Kari</b>		
<b>Dean of Liberal Arts</b>			<b>Veterinary Technology</b>		
AA	Pre-Education	Rochester Community and Technical College	AAS	Veterinary Technology	Ridgewater Community and Technical College
BA	Mathematics	St. Olaf College			
EdD	Mathematics Education	University of Montana			
MEd	Mathematics Education	University of MN – Minneapolis			
<b>Frank, Matthew</b>			<b>Huelsbeck, Simon</b>		
<b>Sociology</b>			<b>Art</b>		
AA	Liberal Arts and Sciences	Rochester Community and Technical College	BFA	Painting	Minneapolis College of Art and Design
AS	Liberal Studies	Rochester Community and Technical College	MFA	Painting	Pennsylvania Academy of the Fine Arts
BA	Sociology	Winona State University			
MS	Sociology: Corrections	Mankato State University			
<b>Frazier, Larry</b>			<b>Israelson, Chad</b>		
<b>Dean of Student Success</b>			<b>History</b>		
BS	Computational Mathematics	University of South Carolina – Upstate	BA	History	University of Wisconsin – La Crosse
MAT	Mathematics	Webster University	BA	Philosophy	University of Wisconsin – La Crosse
			MA	History	University of Nebraska – Lincoln
<b>Fritz, Cherie</b>			<b>Jacobsen, Jeffrey</b>		
<b>Dental Hygiene</b>			<b>Art</b>		
AS	Dental Hygiene	Rochester Community and Technical College	BFA	Art	University of Wisconsin – Oshkosh
BS	Dental Hygiene/Hygienist	University of Minnesota	MFA	Art	University of Wisconsin – Milwaukee
MS	Dental Hygiene Education	University of Missouri – Kansas City			
<b>Froelich, Daniel</b>			<b>Jadin, Jason</b>		
<b>Mathematics</b>			<b>Dean of Sciences and Health Professions</b>		
BS	Chemistry	Minnesota State University - Mankato	BS	Chemistry	University of Wisconsin – Steven Point
MS	Mathematics & Statistics	Minnesota State University – Mankato	MS	Chemistry	University of Minnesota
<b>Fruth-Dugstad, Robin</b>			<b>Johnson, Doreen</b>		
<b>Horticulture</b>			<b>English</b>		
BS	Agriculture, General	University of Wisconsin – River Falls	BS	Business Education	Bemidji State University
MS	Horticultural Science	Iowa State University	BS	General Business	St. Cloud State University
			MFA	Creative Writing	Hamline University
			MBA	Business Administration	University of Minnesota – Duluth
<b>Fuller, Bret</b>			<b>Kennedy, Betsy</b>		
<b>English</b>			<b>Nursing</b>		
BA	English	Eastern Illinois University	BSN	Nursing	Marquette University
MA	English	Eastern Illinois University	MSN	Psychiatric/Mental Health Svcs	Boston University
MAIS	History/Psychology	Western New Mexico University			
MS	Educational Administration	Eastern Illinois University			
PhD	English	University of Mississippi			
<b>Halsey, Jackie</b>			<b>Kerr, Thomas</b>		
<b>Cancer Registry Management</b>			<b>Psychology</b>		
AAS	Human Resource Specialist	St. Paul Technical College	AA	General Studies	Diablo Valley College
AS	Nuclear Medical Technology	Hillsborough Community College	BA	Psychology	California State University – Chico
			MA	Social Psychology	San Francisco State University

## FACULTY AND ADMINISTRATION ROCHESTER COMMUNITY AND TECHNICAL COLLEGE

<b>Korf, Gina</b>			<b>Musgjerd, Jean</b>		
<b>Biology</b>			<b>Health</b>		
BA	Biology	St. Catherine's University	BS	Physical Education	Bemidji State University
PhD	Molecular Biology	University of California, San Diego	MS	Physical Education: Sport Administration	Bemidji State University
<b>Kroeger, Joseph</b>			<b>Mutschelknaus, Mike</b>		
<b>Health Information Technology</b>			<b>English</b>		
AAS	Health Information Tech.	Rochester Community and Technical College	BA	English	Kent State University
BS	Health Information Admin.	Dakota State University	MA	English	Kent State University
MHA	Health Administration	A. T. Still University	Edd	Leadership	Saint Mary's University
<b>LaForge, Joseph</b>			<b>Newman, Dawn</b>		
<b>Mathematics</b>			<b>Nursing</b>		
BS	Economics	Northern Michigan University	BSN	Public Health/Comm. Nsg	Winona State University
MA	Economics	University of Iowa	MSN	Organizational Leadership	Winona State University
MS	Mathematics	University of Iowa	<b>O'Bryan, Allan</b>		
<b>LaPlante, Brian</b>			<b>Accounting</b>		
<b>Physical Education</b>			BBA	Accounting	Evangel College
BS	Physical Education	Winona State University	MAcc	Master of Accountancy	Missouri State University
MS	Exercise/Sports Science PE Teaching	University of Wisconsin – La Crosse	<b>O'Neill, Timothy</b>		
<b>Lee, Tammy</b>			<b>Philosophy</b>		
<b>Business</b>			BS	Philosophy	Eastern Michigan University
AA	Business Admin/Mgmt	Bethany Lutheran College	MA	Philosophy	Michigan State University
BS	Business Admin/Mgmt	Mankato State University	<b>Pyfferoen, Kelly</b>		
MBA	Business Admin/Mgmt	Mankato State University	<b>Interim Vice President of Finance and Facilities</b>		
Edd	Education Policy and Administration	University of Minnesota	BAS	Business Administration	University of Wisconsin – Stout
<b>Lepper, Jeffrey</b>			MBA	Business Administration	Cardinal Stritch College
<b>English</b>			<b>Pyfferoen, Michelle</b>		
BA	English	University of Wisconsin – Eau Claire	<b>Vice President of Academic Affairs</b>		
MFA	Creative Writing	University of Idaho	AS	Liberal Arts and Science	Rochester Community and Technical College
<b>Mahlberg, Jamie</b>			BA	Business Administration	Winona State University
<b>Psychology</b>			MBA	Business Administration	Winona State University
BA	Psychology	Loras College	<b>Qader, Mirwais</b>		
MA	Psychology	University of Northern Iowa	<b>Chief Information Officer</b>		
Edd	Educational Leadership	Minnesota State University – Mankato	BS	Computer Sciences and Statistics	University of Wisconsin - Madison
<b>Martinez, Jessie</b>			EMBA	Executive Masters in Business Administration	University of Wisconsin - Madison
<b>Economics</b>			<b>Rager, Randy</b>		
AA	Management	University of Maryland – Munich, GE	<b>Physical Education/Health</b>		
BBA	Economics	Saginaw Valley State University	BA	Elementary Education	University of Minnesota – Morris
MA	Economics	Central Michigan University	MS	Sports Management	Saint Cloud State University
<b>McCormick, Scannell (James)</b>			MS	Physical Education	Saint Cloud State University
<b>English</b>			<b>Renken, Randal</b>		
BA	English/German	University of Wisconsin – Madison	<b>Biology</b>		
MA	English	University of Wisconsin – Madison	AS	Liberal Studies	Rochester Community and Technical College
PhD	English	Michigan University	BS	Biology: Allied Health	Winona State University
<b>Mehra, Ajay</b>			MPT	Physical Therapy	Mayo School of Health – Related Sciences
<b>Health Information Technology</b>			<b>Ristau, Katie</b>		
AAS	Health Information Tech.	Ridgewater College	<b>Dental Hygiene</b>		
BS	Biology	University of Delhi, India	BS	Dental Hygiene	Minnesota State University – Mankato
RT	Radiologic Technology	Rice Memorial Hospital	MS	Dental Hygiene/Hygienist	University of New Mexico
<b>Meier, Jason</b>			<b>Robinson, Bonnie</b>		
<b>English</b>			<b>English</b>		
BA	English/Spanish	University of Minnesota – Duluth	BA	English	University of North Dakota
MA	English Education	University of Minnesota – Duluth	MA	English	University of North Dakota
<b>Milbrandt, Rod</b>			<b>Rostvold, Anthony</b>		
<b>Physics</b>			<b>Art</b>		
BA	Physics/Mathematics	Saint Olaf College	AS	Digital Arts: Multimedia Emphasis	Rochester Community and Technical College
MS	Physics	University of Wisconsin – Madison	BFA	Graphic Design	University of Minnesota – Duluth
MS	Medical Physics	University of Wisconsin – Madison	MFA	Art – Graphic Design	University of Minnesota – Duluth
PhD	Physics	University of Wisconsin – Madison	<b>Rowley, Kimberly</b>		
<b>Mohawk, Randy</b>			<b>Veterinary Technology</b>		
<b>Peace Officer</b>			BA	Biology	Saint Mary's University
AAS	Law Enforcement	Alexandria Community and Technical College	DVM	Veterinary Medicine	University of Minnesota-Twin Cities
BS	Law Enforcement	Metropolitan State University			
MS	Criminal Justice	St. Cloud State University			



## FACULTY AND ADMINISTRATION ROCHESTER COMMUNITY AND TECHNICAL COLLEGE

**Rubin, Cory****Biology**

BA	Animal Science	University of Illinois – Urbana – Champaign
MS	Natural Resources and Environmental Sciences	University of Illinois – Urbana – Champaign
PhD	Natural Resources and Environmental Sciences	University of Illinois – Urbana – Champaign

**Rubin, Jennifer****Biology**

BA	Biology	St. Olaf College
MS	Plant Biology	University of Illinois – Urbana – Champaign
PhD	Plant Biology	University of Illinois – Urbana – Champaign

**Rud, Nikkilynn****Dental Assistant**

AAS	Dental Assistant	Herzing College
BAS	Healthcare Leadership and Administration	Winona State University

**Ruffin, Heather****Nursing**

BSN	Nursing Science	University of Mary
MSN	Advanced Nursing Practice	Winona State University

**Scheckel, Vincent****Peace Officer**

BAS	Criminal Justice, Political Sci.	University of Wisconsin - Platteville
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**Schnaedter, Mark****English**

BA	English Education	Virginia Commonwealth University
MFA	Writing	Western Michigan University

**Schultz, Carol****Dental Assistant**

Diploma	Dental Assistant	Rochester Community and Technical College
AA	Liberal Arts & Science	Rochester Community and Technical College
BA	Professional Studies	Winona State University

**Seaver, Paul****Facility and Service Technology**

AAS	Building Utilities Mechanical	Rochester Community and Technical College
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**Shea, Brandon****Philosophy**

BA	English	Winona State University
MA	Philosophy	University of Illinois - Champaign
PhD	Philosophy	University of Illinois - Champaign
GC	Instructional Design	University of Illinois - Champaign
GC	Programming	Harvard University, Extension

**Shelerud, Mary****Nursing**

BS	Nursing	St. Xavier University
MSN	Nursing Education	Viterbo University

**Sievers, John****English**

BA	English Education	University of Northern Iowa
MA	English	University of Minnesota
PhD	English	University of Minnesota

**Sklenicka, Heather****Chemistry**

BS	Chemistry	Drake University
PhD	Chemistry	University of Minnesota – Twin Cities

**Stanchfield, Mark****Business Office Professional**

BS	Business Education	Minnesota State University – Mankato
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**Steele, Brian****Art**

BFA	Photography	University of Arizona
MFA	Studio Art (Photography)	University of New Mexico

**Stegge, James****Biology**

BS	Biology	Briar Cliff College
MA	Biology	University of South Dakota

**Steinberg, Jennifer****Nursing**

BSN	Nursing	Excelsior College
MSN	Nursing	Excelsior College
MS	Executive Leadership in Nursing	University of Colorado
PhD	Nursing	University of North Dakota

**Stoltman, Nate****Executive Director of Communications-Marketing-External Relations**

BA	Communications Arts, Electronic Media Emphasis	Wartburg College - Waverly, IA
MA	Strategic Communication Management	Concordia University – St. Paul, MN

**Swintek, Amanda****Mathematics**

MS	Mathematics and Statistics	Minnesota State University - Mankato
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**Szucs, Suzanne****Art**

BFA	Art Photography	San Francisco Art Institute
MFA	Art Photography	School of the Art Institute of Chicago

**Tacinelli, John****Earth Science**

AS	Science	Dutchess Community College
BS	Geology	State University of New York - Stony Brook
MA	Geology	Binghamton University
PhD	Geology	University of Minnesota

**Theisen, Paula****Accounting**

Diploma	Accountant, Junior	Rochester Community and Technical College
BA	Organizational Management And Communications	Concordia University
MA	Organizational Management	Concordia University

**Titus, Paul****Welding**

DIP	Welding	Minnesota State College – Southeast Technical
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**Tjossem, Jaime****Biology**

BS	Biology	University of Wisconsin – Eau Claire
MS	Biology	University of Wisconsin – Eau Claire

**Tweeten, Taresa****Communication Studies**

BA	Speech Communication and Theatre	Gustavus Adolphus College
MA	Speech Communication	University of North Carolina – Greensboro

**Vang, Deb****Counseling**

BS	Theatre Arts	Minnesota State University, Mankato
MS	Counseling: College Student Personnel	Minnesota State University, Mankato

**Vedamuthu, Daniel****Art**

BFA	Art	University of Wisconsin – Stout
MA	Art	Minnesota State university – Mankato

**Vrieze, Nikka****English**

BA	English	University of Regina
MA	English	University of South Dakota

**Wang, Xiaomin****Mathematics**

BS	Mathematical Sciences	East China Normal University
MS	Statistics	Shanghai University of Finance and Economics
PhD	Mathematics	New Mexico State University

**West, Daniel****Communication Studies**

BA	Communications	Bluffton College
MA	Rhetoric and Communication	Kent State University

**FACULTY AND ADMINISTRATION  
ROCHESTER COMMUNITY AND TECHNICAL COLLEGE**

**Whitfield, Pamela****English**

BA	English	St. Andrews Presbyterian College
MA	English	University of North Carolina – Greensboro
PhD	Composition & Rhetoric	University of North Carolina – Greensboro

**Willihnganz, Michelle****Nursing**

AA	Liberal Arts	Rochester Community College
BS	Nursing	Winona State University
MS	Nursing	University of Minnesota

**Wright, Karin****Communications Studies**

BA	Speech	University of North Dakota
MA	Speech Communication	San Diego State University

**Yankowiak, Michelle****Nursing**

BS	Nursing	University of North Dakota
MA	Nursing	Augsburg University

**Yankowiak, Rick****Facility and Service Technology**

Diploma	Construction Electrician	Albert Lea Vocational College
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**Zirbel, Eileen****Surgical Technology**

Diploma	Surgical Technology	Rochester Community and Technical College
AA	Accounting	North Iowa Area Community College
BA	Individualized Studies	Metropolitan State University



**MINNESOTA STATE**

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**A member of Minnesota State**