ANOKA
TECHNICAL COLLEGE
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Academic Catalog

2018-2019

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Anoka Technical College (ATC) has made every effort to ensure the accuracy of the material contained within this catalog as of the publication date. Anoka Technical College reserves the right to make changes to the content of this catalog and other college publications, policies, procedures, program information, fees, calendars, bulletins, or announcements without notice. Revisions to information contained in this publication will be posted to the official College Web site at: AnokaTech.edu/.

Each student is responsible for being familiar with the information appearing in this catalog and the Student Planner. Failure to read the regulations will not be considered an excuse for noncompliance. Anoka Technical College acknowledges its legal and moral responsibility to ensure equal employment and educational opportunities with no discrimination regarding race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, membership or activity in a local commission as defined by law. The College is in compliance with Title IX and Section 504 and will continue its affirmative action commitment to removing barriers to equal employment and educational opportunity.

This information is available on the Web for those needing to access it in alternative format.

06/2018

MINNESOTA STATE | *Anoka Technical College*
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College Telephone Directory

General Information	763-433-1100
Enrollment Services	763-576-7710
Adult Basic Education	763-576-7840
Bookstore	763-576-7750
Business Office	763-576-7720
Counseling	763-576-4036
Disability Services	763-576-4069
Financial Aid	763-576-7730
Job Placement Services	763-576-7780
Library	763-576-7850
Placement Testing (Accuplacer)	763-576-7830
Professional & Workforce Training	763-433-1200
Records & Registration Office	763-576-7740
Student Senate	763-576-7890
Veterans Educational Benefits	763-576-7740

! In case of emergency call, 911 immediately, then call the Security Office at 612-819-4585 and advise them that 911 has been called and for what reason.

Academic Calendar

Fall Semester 2018
First Day of Fall Semester .... Monday, Aug. 27
Holiday Observed, College Closed, No Classes .... Monday, Sept. 3
No Classes.. Thursday, Oct. 18 to Friday, Oct. 19
Holiday Observed, College Closed, No Classes .... Monday, Nov. 12
Holiday Observed, College Closed, No Classes .... Thursday, Nov. 22 to Friday, Nov. 23
Commencement Ceremony .... Thursday, Dec. 20
Last Day of Fall Semester... Friday, Dec. 21

Spring Semester 2019
First Day of Spring Semester.. Monday, Jan. 14
Holiday Observed, College Closed, No Classes .... Monday, Jan. 21
No Classes... Friday, Feb. 15
Holiday Observed, College Closed, No Classes .... Monday, Feb. 18
Spring Break, No Classes.. Monday, March 11 to Friday, March 15
Commencement Ceremony .... Thursday, May 16
Last Day of Spring Semester.. Friday, May 17

Summer Semester 2019
First Day of Summer Session .... Tuesday, May 28
Holiday Observed, College Closed, No Classes .... Thursday, July 4
Last Day of Summer Session... Friday, July 19

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Welcome to Anoka Technical College & our Academic Catalog!

We are thrilled you have committed to pursuing an exciting academic career with Anoka Technical College. Now is the time to discover what our college has to offer you! Anoka Tech's faculty, counselors, advisors and staff are here to help you be successful.

Located in the historic river city of Anoka, MN, Anoka Technical College has provided technical training and degrees since 1967. Our programs bring you closer to career growth, earning potential and confidence! A college education is a valuable investment. It allows you the opportunity for expanded career choices and a plan to achieve your personal and professional goals. As an Anoka Technical College student, your studies move beyond lecture and dive into hands-on learning opportunities. Faculty members are innovative educators – experts in their career fields.

Our Strategic Plan is guiding the work that is being done by faculty and staff to promote student success and build on values of support. I ask you to actively engage with staff and connect with faculty in your classrooms. Our dedicated faculty and staff foster a belief of diversity and inclusion to help create a welcoming culture for students of all walks of life.

Welcome and thank you for choosing Anoka Technical College. We congratulate you for taking action on your future and becoming a student today.

Sincerely,

Kent Hanson, Ph.D.
President, Anoka-Ramsey Community College & Anoka Technical College

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About Anoka Technical College

Founded in 1967, Anoka Technical College is a member of Minnesota State and offers more than 35 career programs leading to occupational careers. For more information, visit AnokaTech.edu.

College Mission, Vision and Goals

Mission: Provide innovative career and technical education to help our students and communities live and learn well.

Vision: A vital student-and community-focused institution, providing the finest career and technical education in Minnesota.

The following are goals of Anoka Technical College:
- Commit to student success
- Promote academic excellence
- Foster a vibrant, sustainable organization
- Establish a strong identity and reputation for excellence
- Strengthen and extend meaningful partnerships

Core College Competencies

The Assessment Committee at Anoka Technical College has identified the following three core college competencies to be included and formally assessed in every certificate, diploma, and AAS degree. All degreed students will be able to
•Communicate effectively
•Problem Solve
•Interact in complex, dynamic environments

A more detailed explanation of each competency follows:

1. Communicate Effectively
Effective communication involves writing, speaking, or communicating using language appropriate to the audience, technology, and purpose. Effective communication also includes receiving information/listening actively with understanding, demonstrating college-level reading comprehension, and writing in standard English.

2. Problem Solve
Problem solving involves recognizing, analyzing, and defining problems, drawing logical well-supported conclusions, and testing them against relevant criteria and standards. Problem solving also includes examining issues by identifying and challenging assumptions (including one's own), developing alternative solutions or strategies, and evaluating practical and ethical implications.

3. Interact in Complex, Dynamic Environments
Interacting in complex, dynamic environments involves collaborating and interacting effectively with others and identifying individual and group roles. It also includes recognizing social responsibilities, ethics, and individual rights in society. Another element is recognizing social diversity, including contributions, traditions, cultures, lifestyles, and/or values of others.

Fast Facts

- **Largest programs:** Practical Nursing, Information Technology, Welding, Medical Assistant
- **Unique programs:** Broadcast Captioning, Judicial Reporting, Occupational Therapy Assistant, Golf Course Grounds Management, Surgical Technology, Medical Scribe Specialist, Gaming Programming Technology, and online Legal Administrative Assistant programs
- Accredited by the Higher Learning Commission

Location

Anoka Technical College is located in the historic river city of Anoka, MN, on 29.3 acres along U.S. Highway 10, about two miles northwest of downtown Anoka. The one-story, 295,000 square-foot main building is a former manufacturing facility built in multiple stages in the 1950s and purchased and renovated for vocational/technical education between 1965 and 1969. The building received a major renewal upgrade in 2002 that addressed long-standing building improvement needs. The campus is highly visible due to its location along a major Twin Cities commuter highway (Highway 10) and light rail line (Northstar Corridor).

2018 Student Profile

- 82% of our first year full-time students receive some form of financial aid or scholarship
- 42% receive a Pell Grant
- 41.% of our students are male and 59% are female
- 56% of our students are full-time and 44% of our students are part-time
- Fall to fall retention rate is 55% (full-time students)
- Overall graduation rate for males is 19% (full-time students)
- Graduation rate for females is 19% (full-time students)
- Overall transfer rate is 17%
- Ethnic diversity is:
  - 75.5% White
  - 8.7% Black or African American
  - 4.0% Hispanic/Latino
  - 4.1% Asian/Pacific Islander
  - 2.9% Two or more races
  - 0.6% American Indian or Alaskan Native
  - 89.7% of career technical program graduates were employed

Source: *IPEDS College Data 17-18 Enrollment Data Statistics/Minnesota State Colleges and Universities*

Accreditation

Anoka Technical College is accredited by the Higher Learning Commission. The college was granted initial accreditation in 1999, and its most recent accreditation was granted in 2014. The College is due for reaccreditation in 2024. Higher Learning Commission, 230 S. LaSalle St, Ste 7-500, Chicago, IL 60604, 800-621-7440

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All programs offered at Anoka Technical College are approved by the Minnesota State Colleges and Universities system, the Minnesota Division of Rehabilitation Services, and the state-approving agency of Veterans Education. In addition, the following programs are accredited by outside accrediting organizations: Automotive Technology (National Institute for Automotive Service Excellence (ASE) Education Foundation); Health Information Technology (Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM); Medical Assistant (Commission on Accreditation of Allied Health Education Programs (CAAHEP); Occupational Therapy Assistant (Accreditation Council for Occupational Therapy Education (ACOTE); Practical Nursing (Minnesota Board of Nursing); and Surgical Technology (Commission on Accreditation of Allied Health Programs (CAAHEP).

Other programs within the colleges are certified, licensed or approved by outside agencies, but do not use the term accreditation. Those programs are Construction Electrician (State of Minnesota Department of Labor and Industry), Emergency Medical Services (State of Minnesota Emergency Medical Services Regulatory Board), and Judicial Reporting (National Court Reporters Association).

Equal Opportunity Institution

Anoka Technical College acknowledges its legal and moral responsibility to ensure equal employment and educational opportunities with no discrimination regarding race, creed, disability, color, religion, national origin, sex, sexual orientation, age, marital status, or inclusion in any group or class protected by state or federal law.

Anoka Technical College is committed to compliance with Title IX, Section 504, the Americans with Disabilities Act, and all state statutes and regulations relating to removing barriers to equal employment and educational opportunity.

Anoka Technical College is a member of a college community that is committed to creating a positive, supportive environment and welcomes a diversity of opinions and ideas for students, faculty and staff of all cultures. The college will not tolerate racism, harassment, or any derogatory remarks about a student's race, sexual orientation, religion, class, gender or physical limitations. Anoka Technical College believes the best and most effective learning environment for tomorrow's leaders is in a multicultural environment.

This catalog is also available in alternate formats. Contact the Office on Disabilities at 763-576-4069.

Admissions

Admission Policy

Anoka Technical College follows an open-door admissions policy, which means that any resident who graduated from an accredited high school, successfully completed a General Educational Development (GED) examination, or demonstrated an Ability to Benefit by taking a placement test is eligible for college admission. In addition, current high school students who meet the requirements for the Postsecondary Enrollment Options (PSEO) program are eligible for college admission. Admission to the college does not automatically qualify a student for all courses and programs at the college. Some courses have special prerequisites and requirements and certain programs require an additional admission process.

The full Admissions Policy can be found at www.anokatech.edu under Policies and Procedures.

Immunization Policy

All students who are registered for more than one class must provide proof of current immunization by the 45th day of the semester to register for the next semester. However, students who were born in 1956 or earlier or have graduated from a Minnesota high school since 1997 are exempt. All students entering a health occupation program that requires an off-campus clinical experience are required to provide acceptable proof of required immunizations.

Transfer Credit Policy

A student wishing to transfer credits into Anoka Technical College must complete the admissions process, be accepted into a program of study, and have official transcript(s) from previous college(s) sent directly to Anoka Technical College's Office of Records and Registration. Anoka Technical College is able to pull transcripts from other Minnesota State institutions once a student has been accepted, so students do not need to request official transcripts from other institutions within Minnesota State.

All other transcripts must be official, which means that the transcript must be received by Anoka Technical College in a sealed envelope. If delivered in person, a transcript must be delivered unopened with the official seal intact. Student copies and faxed transcripts are not considered official.

The evaluation will be completed according to Minnesota State Board Policies and Procedures and will involve the following three conditions:

1. Educational quality of the learning experience which the student transfers,
2. Comparability of the nature, content, and level of the learning experience offered by the receiving college, and
3. Appropriateness and applicability of the learning experience to the programs offered by the receiving higher education entity in light of the student's educational goals

General Transfer Policies

Only those courses that are applicable to a student's certificate, diploma or degree will be considered for transfer. Anoka Technical College will accept in transfer courses that it determines to be comparable or equivalent to specific courses it offers.

Technical College Credits

Transfer of technical credits will be considered for courses that have been completed within five years prior to application for admission to Anoka Technical College. Students with technical courses which were completed more than five years prior to application should consult with program faculty for options for applicability.

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Transfer of MnTC and Other Courses

Anoka Technical College will accept all Minnesota Transfer Curriculum (MnTC) courses and goal areas as defined by the sending institution. However, there is no guarantee that courses from private and non-Minnesota colleges will satisfy MnTC goals; such courses are evaluated on an individual basis.

Anoka Technical College will accept courses from other institutions with grades of "D" or higher. While the college will accept grades of "D", individual departments (due to varying departmental policies regarding acceptable grades for graduation) may not accept them.

Transfer Resources

- Transferology
- Anoka Technical College Articulation Agreements
- Minnesota Transfer website
- CAREERwise Edcuation

Appealing the Transfer Evaluation

If a student is not satisfied with a decision regarding transfer of credit, the student may petition using the Appeal of Transfer Credit form. Program faculty and the Academic Dean review the appeal. If a student is not satisfied with the transfer appeal decision, the student may appeal the decision at the system level to the Minnesota State Senior Vice Chancellor of Academic and Student Affairs. The decision of the Senior Vice Chancellor is final.

Credit for Prior Learning (CPL)

Credit for Prior Learning is a process in which students get academic credit for learning they have gained in non-credit or experiential settings. Credit for prior learning (CPL) shall be granted according to the standards and equivalencies of the American Council on Education or the equivalent.

There is a cost per credit. Anoka Technical College adheres to Minnesota State policies and procedures on CPL. Interested students should contact the Office of Records and Registration at 763-576-7740 or visit the college website at AnokaTech.edu.

Anoka Technical College may accept the following as credit for prior learning:

- Advanced Placement (AP)
- Articulated College Credit (formerly Tech Prep)
- College Level Examination Program (CLEP)
- Credit by Examination
- Military Education Experience
- Prior Learning Assessment

Records & Registration

Registration

Students are responsible for timely and accurate registration. Students are liable for tuition and fees for all registered courses. Students must withdraw or drop their registration online through their eServices account or in writing at the Office of Records and Registration if they do not plan to attend Anoka Technical College. Please note that course registrations will not be dropped for students who have a processed financial aid application (FAFSA). Deadlines and restrictions apply.

Non-Degree Seeking/Visiting Students

This option is designed for students who are not seeking a degree or certificate, do not want financial aid, and want to take less than nine credits. Students should complete a Non-degree/Visiting Student form and submit it along with an immunization form to the Office of Records and Registration. The form is available online at AnokaTech.edu.

Change from Non-Degree Seeking to Admitted Status

To change from a non-degree seeking/visiting student to a degree-seeking student, students should complete the steps for general/regular student admission. Contact the Office of Enrollment Services at EnrollmentServices@anokatech.edu for additional information.

Senior Citizen Registration Policy

Minnesota resident senior citizens, 62 years of age or older, may enroll in credit courses on a space-available basis for an administrative fee of $20 per credit plus fees. Registration for Minnesota senior citizens at the reduced fee begins the first business day after the first class session. Senior citizens who register before the second day of the class are required to pay full tuition and fees. To audit a course at no charge on a space-available basis, seniors must notify the Office of Records and Registration of their intent at the time of registration.

Change of Registration (adds and drops)

Students may add or drop courses through the online registration process the first five business days of the semester. This five day period is called the "Add/Drop period" when students are able to drop classes with a full refund and without a "W" grade recorded on their transcript. For classes beginning after the first week of the semester, students have one (1) business day from the start of the class to add or drop individual classes.

Called to Active Duty Withdrawal Policy

Minnesota State Procedure 5.12.1 provides guidance for students who are members of any branch of the U.S. military and who are unable to complete a semester due to being called to active duty. These students must, to the extent possible, be provided with one of the following options after providing a copy of the call-up papers:

1. The student may withdraw from one or more courses for which tuition and fees have been paid and be given a full refund of tuition and fees. The student may either receive a retroactive drop from the course(s) or "W" grade(s) with an approved tuition waiver and Military Withdrawal annotation on the student's record, whichever is deemed in the student's best interest. A student receiving financial aid who chooses this option must be informed that they may be liable for any required refunds of state or federal financial aid funds.
2. The student may be given a grade of incomplete in a course and complete it upon release from active duty.
3. The student may continue and complete the course for full credit. Class sessions missed by the student due to performance of active military service must be counted as excused absences and cannot be used to adversely impact the student's grade or standing in the class. A passing grade must be awarded if, in the opinion of the faculty member teaching the course, the student has completed sufficient work and has demonstrated sufficient progress toward meeting course requirements to justify the grade.

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Additionally, it is strongly recommended for financial aid recipients to check with the Financial Aid Office.

Grades
Grades will be available through eServices approximately five (5) days after the last day of the semester. Students may also obtain and print an unofficial transcript through eServices.

Official Transcripts
Official Transcripts can be requested in three ways:
- **Online** at www.getmytranscript.com
- **In person** at the Office of Records and Registration
- **By Mail:** Students can mail the *Transcript Request Form* located on the college website along with payment information to the Office of Records and Registration. After the office receives the transcript request form and the Business Office processes the transcript charge, the transcript will be issued.
- If no holds exist on the student record, Anoka Technical College will send official transcripts to the institution or organization which the student has requested.
- Students are not required to request or pay for transcripts that other Minnesota State institutions can access via eTranscripts.

Tuition & Fees

Tuition and fees for each term are based upon the number of credits a student enrolls. The 2018-19 general tuition and fees rate is $186.12 per semester credit. Tuition and fees are set by the Board of Trustees of the Minnesota State system and are subject to change without notice. Some courses or academic programs have differential tuition rates due to the increased cost of offering courses or academic programs. Visit AnokaTech.edu for up-to-date tuition and fee rates.

Programs with Differential Tuition and Fees
- Judicial Reporting $266.53 per credit
- Surgical Technology $208.57 per credit
- Practical Nursing $187.77 per credit
- Welding $187.77 per credit
- Online courses $181.98 per credit

Fees included with Tuition
The following fees are set annually and may be found on the college website. The following fees are charged on a per-credit basis and included in the tuition/fee rate:

- Minnesota State College Student Association fee
- Parking/Access fee
- Student Association fee
- Technology fee

Other Fees
- Non-sufficient fund (NSF) fee: $25
- Late fee (maximum per semester): $50
- Payment plan fee (maximum per semester): $24
- Placement (Accuplacer) retest fee: $10
- Prior Learning Assessment: $75 per credit
- Transcript: $7.50

- Student ID Replacement Card fee: $5
- Duplicate Diploma: $10

Drop for Non-Payment Policy
Students must pay or make payment arrangements for their tuition and fees by the due dates published on the college's academic calendar located on the website. Failure to pay tuition and fees may result in courses being dropped for non-payment. Please note that courses will not be dropped for students who have applied for financial aid. Course registrations will not be dropped even if a student is not approved for financial aid. Students who do not intend to take courses during a given semester must officially drop their courses online before the start of the term.

Tuition Refund Policy
Full refunds will be given for any course cancelled by the college. In order to receive a 100% refund for tuition and fees, students must drop their courses online via their eServices account prior to the 5th business day of the semester. Tuition Refunds after the 5th business day of the semester are prorated according to the chart found here: AnokaTech.edu/BecomeStudent/TuitionFees/Withdrawals refund.

Exception to Policy
Students have 60 days after the end of the semester to petition for a late course withdrawal or a late complete withdrawal with partial refund. All petitions must be signed by the student, legal guardian, power of attorney or executor (in case of death). Documentation may be required if the petition is from someone other than student.

Students should complete the *Exception to Policy Form* located in the *Student Forms* section of the college website and include a written statement describing the circumstances and reasons for their appeal and any required documentation.

Financial Aid

Availability of Financial Aid
Financial aid is available for full and part-time students. To be eligible for financial aid, students must be accepted into a program that is financial aid eligible, is at least 16 credits in length, and is leading to an Associate of Applied Science (AAS) degree, diploma or certificate. There are both state and federal regulations related to financial aid, and these regulations are subject to change.

If you have been arrested, charged, or convicted of any criminal offense, you should investigate the impact that the arrest, charge, or conviction may have on your chances of employment in the field you are intending to study or on your chances to obtain federal, state and other higher education financial aid.

Financial Aid Programs
Anoka Technical College participates in federal and state grant, loan, and work-study programs. Unless otherwise indicated, eligibility for aid programs is based on the following:

- An undergraduate student who does NOT have a bachelor's degree
- A U.S. citizen or eligible non-citizen
- Earned a high school diploma or GED
- Admitted to the college as degree-seeking student enrolled in an

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eligible program

- Eligible programs must be at least 16 credits in length and leads to an Associate of Applied Science (AAS) degree, certificate or diploma
- If male, be registered with the Selective Service Administration
- Maintaining Satisfactory Academic Progress (SAP) as defined in the college's *Satisfactory Academic Progress Policy* which can be found in another section of the *Student Handbook.*
- Not in default on a federal student loan or owe an overpayment on a federal grant
- Must not have been convicted of a drug offense while receiving federal aid
- Students will be considered for all financial aid programs in which they are eligible to receive which may include:
    - Federal Pell Grant
    - Federal Supplemental Educational Opportunity Grant (SEOG)
    - Minnesota State Grant
    - Minnesota Child Care Grant
    - Minnesota GI Bill
    - Minnesota SELF (Student Educational Load Fund) Loan
    - American Indian Scholarships
        - o Federal Bureau of Indian Affairs
        - o Minnesota Indian Scholarship Program
    - College Foundation Scholarships
    - Federal and State Work-Study programs
    - Federal Direct Loans
        - o Subsidized Loan
        - o Unsubsidized
        - o Federal Direct PLUS (Parent loan for under graduate students)

Loan Entrance Counseling must be completed for all first-time federal direct loan borrowers before loan funds can be disbursed. Additional information is provided on your award letter.

Exit Counseling must be completed after graduating or dropping below half-time. Students will be notified of this requirement, and be provided information and directions for completing this requirement, by the financial aid office at the appropriate time.

Loan Repayment begins six months after a student graduates or is no longer enrolled at least half-time.

Applying for Financial Aid

All students are encouraged to apply for financial aid whether or not you think you be may be eligible. To apply for financial aid, students must complete the Free Application for Federal Student Aid (FAFSA) at www.fafsa.gov. It is recommended that students apply for financial aid each year by mid-March or as soon as they complete their federal income tax returns.

Returning students should complete a renewal application also available at www.fafsa.gov. Your FAFSA requires an electronic signature or FSA ID which can be obtained at fsaid.ed.gov

The federal processors may require that the college verify the accuracy of the data on your FAFSA through a process called "verification." Approximately 30% of all students are selected for federal verification. If a student is selected for verification, the student will receive an email from the Financial Aid Office to their student email address requesting additional information which may include: a copy of student, parent (if dependent student) or spouse (independent student) IRS Tax Transcript, W-2's, untaxed income information and other household information.

When the financial aid application has been completed, the student will receive an Award Letter, via the student eServices account, from the Financial Aid Office which details financial aid eligibility for grants, work-study and loans including required enrollment levels.

Student Resources

Enrollment and Success Coaches, 763-576-7710, Rm 117
Assistance provided to create a personalized success plan to reach your academic, career or personal goals. Walk-ins are welcome, and appointments have priority.

Career Services/Job Placement
Student Success Center Rm 190F, 763-576-7780
Staffed by an employment counselor from the Minnesota WorkForce Center-Anoka County, this office provides assistance with resumes, cover letters, interview preparation and other job search activities. Appointments are preferred.

Computer Learning Lab
Academic Resource Center Rm 180, 763-433-1510 (Press 1)
Computer and internet access for students who are taking classes at Anoka Technical College. Complete assignments, work on group projects, and complete coursework for on-line classes. Assistance provided by Computer Lab Assistant (CLA) and others with computer expertise.

Counselor
Student Success Center Rm 190L, 763-576-4036
Academic, career and personal concerns counseling. Walk-ins are welcome, and appointments have priority.

GED Testing through Metro North Adult Basic Education (ABE)
Student Success Center Rm 190 O, 763-576-7840
Resources for adults preparing for the GED test. See Anokatech.edu for more information on hours and services.

Library
Academic Resource Center (ARC)
Research and reference assistance, Student ID cards, fax transmittal and photocopying services, reservation of textbooks.
Fall and Spring Semester Hours:
Monday - Thursday: 7:30 am to 8 pm
Friday: 7:30 am to 4 pm

Math Lab , **Rm 173**
Free service for students seeking assistance with math. Drop-in tutoring provided by peer tutors and math instructors.

Metro North Adult Basic Education (ABE)
Student Success Center Rm 190N, 763-576-7845
Free program
Prepare for college; improve basic reading, writing and math skills;

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prepare for GED or adult diploma; prepare for Accuplacer testing and retesting; and take English Language Learner (ELL) classes.

Office of Disabilities
Student Success Center Rm 190G, 763-576-4069
Accommodations and service delivery provided for students with a documented disability. Call for appointment. Bring documentation to your scheduled meeting.

Peer Tutoring Program
Rm 130, 763-576-4069
Improve academic performance in technical coursework by working with a peer tutor. Free service. Peer tutors are faculty-recommended, exceptionally knowledgeable students enrolled in the same program as you. Tutor schedules are available in the Writing Center Rm 130.

Testing Center
Rm 103, 763-576-7830
Testing services include Accuplacer, ATI TEAS, make-up testing, distance proctoring for students attending other colleges within the MN State system, fee-based distance proctoring for non-MN State students, fee-based licensure exams. Test accommodations provided upon referral from the Office on Disabilities. Call for details or stop by the Testing Center.

Veterans Center
Rm 333
The Veterans Center is space dedicated to veterans, reservists and family members and contains resources and information to support the transition from military to civilian life.

North Metro Regional VA Coordinator
Charles Egerstrom, 763-433-1113 cegerstrom@anokaramsey.edu

Veteran's Certifying Official 763-576-7740
Anoka Technical College welcomes and supports veterans, reservists and their families and recognizes the contributions they make as citizens and as students.

Writing Center
Rm 130, 763-576-4069
Free service for students seeking assistance with writing. (See schedule in Writing Center for hours.)

Student Life

Anoka Technical College is committed to providing a wide range of student life organizations that advance the college mission to help students and communities to live and learn well.

The student organizations are multidimensional and give students an opportunity to become engaged in campus activities to balance work and life, meet friends, and develop leadership skills and to enjoy the college experience. The student life organizations at Anoka Technical College are built around student and community interests and needs. To learn more, visit AnokaTech.edu.

Multicultural Student Center, Rm 177
Welcome! Lali! Willcommen! Bienvenue! Xin Chào, Bienvenidos! The Multicultural Student Center at Anoka Technical College welcomes many different cultures and ethnicities. Truly unique to

a two-year technical college, the center serves as a meeting place and resource center for students, faculty, staff and other community organizations.

Student Senate, Rm 175
The Student Senate serves as advocates for all Anoka Technical College students. In addition to being the voice in front of local and state elected officials for fighting for lower tuition and more financial aid, the Student Senate represents the student body at meetings and in college committees. They also subsidize the cost of professional conferences and competitions for students and provide social, educational, cultural and leadership activities for the entire college.

The Student Senate meetings are open to all students. The meetings are held on the 1st and the 3rd Wednesday of the month.

Phi Theta Kappa
Phi Theta Kappa's mission is two-fold:
1. Recognize and encourage the academic achievement of two-year college students and
2. Provide opportunities for individual growth and development through participation in honors, leadership, service and fellowship programming.

Clubs and Organizations
Anoka Technical College strives to provide students opportunities to engage with other students, faculty, and staff through student activity, student organization, and other student life programming.

Current Student Life opportunities at Anoka Technical College include:

- **Horticulture Club** provides students opportunities for leadership development and service.
- **Multicultural Club** provides students with opportunities to enhance the appreciation and understanding of the diversity within the college and the community.
- **Occupational Therapy Club (TECOTA)** offers students the opportunity to develop leadership skills and engage more in their field.
- **Peer Tutors** are students trained to tutor their peers in a variety of academic subjects.
- **Student Activities** provide a regular schedule of on and off campus gatherings, events, and entertainment opportunities.
- **Student Ambassadors** are students working together to promote the college and welcome new students to Anoka Technical College.
- **Welding Club (Skills-USA)** provides opportunities for students to complete in their field.

Career Planning Resources
College Central is a job search website for Anoka Technical College students and alumni. College Central offers a tools such as a resume builder, and resources related to job search and interviewing. Visit www.collegecentral.com/anokatech/

Student Policies

Student Rights and Responsibilities
Student Code of Conduct

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As an institution dedicated to teaching and learning, Anoka Technical College has a vested interest in maintaining an environment in which all students are free to pursue their academic interests and responsibilities. Conduct by a single student or group of students that unreasonably restricts such freedom and interferes with the college mission of promoting student learning is subject to regulation and/or sanction by the college. The creation of such an environment is premised on the assumption that students have both rights and responsibilities. Therefore, a major function of the college is to guarantee student rights and at the same time to expect student responsibility.

The Anoka Technical College *Student Code of Conduct* serves two purposes: to serve as a guide for student behavior and outline the procedure to be followed, both by students and college officials, should violations of the Code occur. It is expected that all students will read and abide by the full *Student Code of Conduct* available in the *Student Handbook*.

Policy 3.12 Student Complaint Process

Student Data Practices
Minnesota State complies with the Family Educational Rights and Privacy Act (FERPA), the Minnesota Government Data Practices Act (MGDPA), and other applicable laws and regulations concerning the handling of educational data. The full *Student Data Practices* policy and procedures can be found on the college website.

Use of Email for Official Communication
Anoka Technical College uses college-assigned email addresses as the official means of communications with all students. All new students will receive their my.anokatech.edu email account during New Student Orientation. Students are responsible for information sent to them via their email account. My.anokatech.edu, a free web-based Microsoft Outlook Live email account, is Anoka Technical College's official means of communicating with students.

Academic Policies

Grades
Student academic performance shall be evaluated solely on the basis of academic standards, including any requirements that are noted in the catalog, course syllabus, or student handbook. Students may review their corrected examinations or other required assignments used by the faculty in evaluating the student's academic performance.

Explanation of Grades
Grades of "A", "B", "C", "D", "F", "P", "S" and "U" are used in evaluating performance in the classes or major and are given to a student each term.

A - denotes excellent achievement
B - denotes above average achievement
C - denotes average achievement
D - denotes below average achievement
F - denotes unsatisfactory achievement
P - denotes passing achievement
S - denotes satisfactory achievement
U - denotes unsatisfactory achievement
I - denotes incomplete work because of unavoidable circumstances. An incomplete must be made up under a schedule arranged with the instructor within one semester.
IP - denotes a course for which no grade has been assigned.
W - denotes withdrawal from a course during the withdrawal period.
FN - denotes that a student never attended the course but never offcially dropped the course.
FW - denotes that a student began attending the course, never completed it, and never officially withdrew from the course.
AU - denotes that a student has registered for and attended a class, but did not earn credit.
Z - denotes a course that is active or not reported.

Grade Average Point (GPA)
The following system will be used to determine a student's grade-point average:

- A = four grade-points per credit
- B = three grade-points per credit
- C = two grade-points per credit
- D = one grade-point per credit
- F, FN, FW = zero grade-points per credit
- AU, I, S, P, U, W, Z, IP = not considered in determining GPA

A student's GPA is determined by adding all grade-points earned and dividing by the sum of all credits attempted in courses for which grade-points are earned. GPA is calculated on a semester and a cumulative basis. The GPA calculation does not include test-out grades, transfer grades, advanced placement or credit for prior learning.

Incompletes
If a student is passing and misses an examination or fails to turn in a major assignment or project as determined by the instructor, a grade of Incomplete may be given. A student with an incomplete must arrange a schedule of completion with the instructor. Incompletes not successfully concluded by the end of the following term will be recorded as an "F" grade. However, incompletes given at the end of Spring semester will be changed to an "F" at the end of fall semester if not properly made up, since summer session is excluded.

Prerequisite Courses
If the completion of a course in which the student earns an incomplete is a prerequisite for another course, registration for the subsequent course is at the discretion of the instructor of the second course. This policy does not apply to developmental prerequisites.

Grades – Repeating Courses
Students may repeat courses for purposes of achieving a higher grade or to review material. Students must register and pay tuition for repeated courses. Test-outs and independent studies are not acceptable means of making up a failed course. Both courses and grades earned will be reflected on the student transcript. The course that was previously taken is not counted in the GPA calculation or earned credits but will count as an attempted credits for calculation of satisfactory academic progress.

A student will be allowed to repeat a course one time. Failure to successfully complete a course (i.e., receiving an "F" "FN" "FW" "U" or

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a "W") when repeating it will result in not being allowed to re- register for that course for six months. Appeals can be directed to the Dean of Academic Affairs.

Failing to successfully complete a repeated course may exclude the student from certain program majors.

Policy 3.8 Grading

Policy 3.9 Academic Grade Appeal

Satisfactory Academic Progress (SAP)

Anoka Technical College and the *Minnesota State Board Policy 2.9.1,* in compliance with federal and state regulations require that all students maintain satisfactory academic progress toward the completion of a degree, diploma or certificate in order to be eligible to receive financial aid (including Federal and State work study, loans, grants, and some scholarships) and remain in good academic standing and continue their enrollment. The purpose of this requirement is to encourage all students to progress steadily at a reasonable rate toward graduation.

The full Satisfactory Acadmic Policy (SAP) policy and can be found at AnokaTech.edu.

Policy 2.7 Satisfactory Academic Progress

Academic Petition
An *Academic Petition* can be used to request a waiver to the academic policies of the college, such as course prerequisites, program requirements, repeating courses, Accuplacer re-testing policy, etc. The form can be found at AnokaTech.edu

Academic Due Process
Academic Due Process is used when a student believes s/he has a valid complaint regarding the content or conduct of a course or grading. The form can be found at AnokaTech.edu

Academic Forgiveness
The *Academic Forgiveness Petition* can be used when a student is seeking forgiveness of previous unsatisfactory academic coursework at Anoka Technical College. The student must meet the conditions listed on the form and contained in the Anoka Technical College Policy 2.11. The form can be found at AnokaTech.edu

Policy 2.11 Academic Forgiveness

Graduation

Graduation Requirements
1. A student will earn a certificate, diploma or Associate of Applied Science (AAS) degree upon satisfactorily completing all requirements for graduation and complying with all applicable policies of the college.

2. Students who do not meet graduation requirements will be notified by letter. Students must reapply for graduation after meeting the requirements.

3. Students will graduate at the end of the term in which they complete all course requirements. However, a student may be allowed to participate in commencement if he/she desires to walk with his/her cohort but have outstanding graduation requirements of seven (7) credits or less and the courses are offered the following semester. The student will not receive an award until they successfully complete outstanding program requirements. If more than seven (7) credits are to be completed, the student will be allowed to participate in commencement after all program requirements are completed the following term.

4. When the student completes all the requirements for graduation and is awarded a certificate, diploma, or Associate of Applied Science (AAS) degree, he/she will receive an official transcript at no charge along with the award in the mail. Additional copies of official transcripts may be obtained for a fee by submitting a request at www.getmytranscript.com.

5. Official Transcripts and awards cannot be released until all financial obligations to Anoka Technical College are met.

6. Honor students who achieve a cumulative GPA of at least 3.5 by the last semester completed prior to graduation will be recognized at the graduation ceremony. This does not include the student's final semester grades.

7. To receive a degree from Anoka Technical College, students must earn one third of their credits through enrollment in Anoka Technical College courses.

8. Students seeking exceptions to the requirements must submit an appeal to the Registrar.

Policy 2.4 Graduation

Partial Completion
Students who applied for graduation but did not meet all graduation requirements for a certificate, diploma or Associate of Applied Science (AAS) degree will receive notification by mail along with an unofficial transcript showing all attempted courses and grades.

Important Note
Program plans are subject to change. Please contact your program advisor for the most current program information.

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Associate of Applied Science (AAS)

The Associate of Applied Science (AAS) degree is intended for students who plan to use the knowledge and skills gained through their degree for immediate employment. This degree will include at least 15 credits of Minnesota Transfer Curriculum (MnTC) credits selected from three of the ten goal areas. All AAS degrees will take at least two years to complete.

Transfer Note

The AAS degree is not designed to transfer to a four-year college or University. However, the MnTC courses typically do transfer and some of the career-oriented courses taken at Anoka Technical College may also transfer to specific majors at selected schools. Many of the AAS degree programs have articulation agreements with four-year institutions for transfer of the program.

- Administrative Specialist
- Architectural Technology
- Automotive Technician
- Biomedical Equipment Technician
- Business Data Analyst
- CNC Design & Manufacturing Technology
- Community Social Services
- Electronic Engineering Technology
- Golf Course Grounds Management
- Health Information Technology
- Information Technology Management
  - Database Design & Development
  - Game Programming
  - Mobile Development
  - Network Analyst
  - Network Management & Security
  - Software Development
  - Web Design & Development
- Judicial Reporting
- Legal Administrative Assistant
- Mechanical Drafting and Design
- Medical Administrative Specialist
- Medical Assistant
- Occupational Therapy Assistant
- Special Electronics
- Supervisory Management
- Surgical Technology
- Welding

Diploma

A diploma is a comprehensive program with extensive technical coursework to help develop job skill that will lead directly to employment. Students choose a specific area of study and will complete their education in one or two years. Many courses within a diploma program may apply toward an AAS degree in the discipline.

- Administrative Specialist
- Advanced CNC Manufacturing Technology
- Architectural and Construction Technician
- Automotive Technician
- Construction Electrician
- Database Design & Development
- Electronic Technology
- Game Programming
- Golf Course Grounds Management

- Information Systems Analyst
- Legal Administrative Assistant
- Mechanical CAD Drafter
- Medical Assistant
- Medical Coding Specialist
- Medical Receptionist
- Mobile Development
- Network Analyst
- Network Management & Security
- Practical Nursing
- Software Development
- Web Design & Development
- Welding Technology

Certificate

Certificates are designed for those students who wish to develop occupational skills for specific job that will lead directly to employment. Students will chose a specific area of study and will complete their education in less than one year. Many courses within a certificate program may apply toward a diploma or an AAS degree in the discipline.

- Administrative Specialist
- Advanced CAD Drafting
- Architectural 2D CAD
- Basic Welding
- Broadcast Captioning/CART
- Construction Estimating
- Emergency Medical Services
- Grounds Maintenance Technician
- Health Technology
- Human Resource Development
- Legal Administrative Assistant
- Machine Technology 1
- Machine Technology 2
- Machine Technology 3
- Mechanical CAD Operator
- Medical Scribe Specialist
- Multi-Axis Machining
- Nursing Assistant/Home Health Aide
- Pipe Welder
- Quality Supervision
- Scoping/Proofreading
- Sterile Processing
- Supervisory Leadership
- Welding Fabricator

General Education

The General Education department offers select courses to prepare individuals for employment in their programs. Courses are currently offered in Biology, English, Mathematics, Philosophy, Psychology, Sociology and Speech. Courses are offered every semester including summer semester. Many offer online or partially online sections in addition to classroom instruction.

Some general education courses are approved as part of the Minnesota Transfer Curriculum (MnTC) and are intended to be accepted at other Minnesota State institutions.

Note: Anoka Technical College does not certify completion of the MnTC. However, the college does recognize and indicate courses and their goal area(s) in the MnTC on the student's *Degree Audit Report (DARS)*.

Career Clusters

- Administration & Management
- Automotive Technology
- Engineering, Manufacturing & Technology
- Golf Course Grounds Management
- Health Science Technology
- Human Services
- Information Technology Management

Special Note for Students Interested in Health Careers

Minnesota Law requires that any person who provides services that involve direct contact with patients and/or residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state. An individual who is disqualified from having direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate at a clinical site.

The student has the right to request reconsideration of the disqualification. For consideration to continue in the program, the student must request reconsideration and provide a copy of such request. The student is responsible for requesting the commissioner to reconsider the disqualification. The college will withdraw any student who is disqualified by the Minnesota Department of Health.

Minnesota Transfer Curriculum (MnTC)

The Minnesota Transfer Curriculum (MnTC) general education credits from Anoka Technical College transfer to all Minnesota State institutions.

Core Goal Areas

Goal 1: Communication
Goal 2: Critical Thinking
Goal 3: Natural Sciences
Goal 4: Mathematics/Logical Reasoning
Goal 5: History and the Social and Behavioral Sciences
Goal 6: The Humanities and Fine Arts
Goal 7: Human Diversity
Goal 8: Global Perspective
Goal 9: Ethical and Civic Responsibility
Goal 10: People and the Environment

Goal 1

COMM 1050	Strengths & Wellness	2 cr
COMM 1055	Strengths & Wellness	3 cr
ENGL 1107	Composition I	4 cr
ENGL 1110	Research Project	1 cr
ENGL 2105	Business & Technical Writing	4 cr
SPCH 1120	Public Speaking	3 cr
SPCH 1200	Interpersonal Communication	3 cr
SPCH 1500	Intercultural Communication	3 cr
Goal 2:		
BIOL 1106	Principles of Biology	4 cr
BIOL 1130	Human Biology	4 cr

BIOL 2100	Anatomy & Physiology I	4 cr
BIOL 2106	Microbiology	4 cr
BIOL 2200	Anatomy & Physiology II	4 cr
COMM 1050	Strengths & Wellness	2 cr
COMM 1055	Strengths & Wellness	3 cr
ENGL 1107	Composition I	4 cr
ENGL 1150	Multicultural Literature	4 cr
ENGL 2105	Business & Technical Writing	4 cr
INTS 1000	Critical Thinking Applications for College	3 cr
Goal 3		
BIOL 1106	Principles of Biology	4 cr
BIOL 1130	Human Biology	4 cr
BIOL 2100	Anatomy & Physiology I	4 cr
BIOL 2200	Anatomy & Physiology II	4 cr
BIOL 2106	Microbiology	4 cr
NSCI 1020	Plant Science	3 cr
NSCI 1030	Introduction to Environmental Science	3 cr
Goal 4		
MATH 1500	Mathematical Ideas	3 cr
MATH 1550	Introduction to Statistics	4 cr
MATH 1600	College Algebra	4 cr
MATH 1650	College Trigonometry	3 cr
MATH 1700	Pre-Calculus	5 cr
Goal 5		
PSYC 1406	General Psychology	4 cr
PSYC 1506	Lifespan Development	4 cr
PSYC 1605	Abnormal Psychology	4 cr
SOSC 1010	Introduction to Sociology	3 cr
SOSC 2000	Sociology at Work	4 cr
Goal 6		
ENGL 1150	Multicultural Literature	4 cr
ENGL 2110	Literature and the Environment	4 cr
Goal 7		
ASL 1000	ASL Deaf Studies/Culture	3 cr
ENGL 1150	Multicultural Literature	4 cr
SOSC 1010	Introduction of Sociology	3 cr
SPCH 1200	Interpersonal Communication	3 cr
SPCH 1500	Intercultural Communication	3 cr
Goal 8		
ASL 1100	American Sign Language I	3 cr
Goal 9		
PHIL 1200	Technology, Ethics and Society	3 cr
Goal 10:		
NSCI 1020	Plant Science	3 cr
NSCI 1030	Intro to Environmental Science	3 cr
ENGL 2110	Literature and the Environment	4 cr

ANOKA
TECHNICAL COLLEGE
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Administration & Management

Administrative Specialist
Associate of Applied Science (AAS) Degree

Technical Requirements................45
General Education/MnTC 15
Total Credits 60

Program Information

The Anoka Technical College Administrative Specialist Associate of Applied Science (AAS) degree is a 60-credit program that prepares students with the broad range of technical and communications skills needed for success in today's office work environment. Students will gain competence in word processing, spreadsheet, database, and presentation software. Keyboarding speed and accuracy is developed while grammar, punctuation and writing skills are polished. Students study bookkeeping theory and learn general ledger software in order to prepare them for general bookkeeping or accounts receivable or accounts payable positions. Students are well prepared to fulfill any office support position and may advance to office management.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Exhibit effective interpersonal skills and professional attitudes by demonstrating the ability to communicate with authority figures and peers; follow work rules and expectations appropriately; maintain confidentiality; and recognize an appropriate business appearance.
2. Demonstrate the ability to express thoughts clearly, concisely, and appropriately in verbal and written format by consistently using correct mechanics, grammar, format, and message approach (direct, indirect).
3. Demonstrate the use of critical thinking skills to analyze and solve business problems by demonstrating the ability to define problems, find relevant information, synthesize and evaluate information, and implement decisions.
4. Exhibit technical competency in keyboarding by demonstrating keyboarding skill proficiency of 45 wpm on a five-minute timing for degrees and diplomas and knowledge of correct document formatting.
5. Demonstrate technical competency by utilizing a wide range of software applications necessary for business office operations; demonstrates initiative in learning to use new technology, and applies new technology accurately in office settings.
6. Demonstrate knowledge of roles and functions of various professionals; collaborate and problem-solve as part of the office team.
7. Demonstrate ability to set priorities, organize work, and sequence tasks appropriately, and consistently complete projects on a schedule.
8. Demonstrate the ability to perform mathematical calculations necessary in business applications including accounting, by working with percentages; decimals and fractions; understanding accounting principles as they are applied to business office bookkeeping; and using formulas for creating spreadsheets and databases.
9. Develop and evaluate customer service skills by ascertaining the characteristics of a customer service organization and using customer service skills in servicing customers professionally.

Admission Requirements

Students are required to have an Accuplacer reading score of 78 or higher or appropriate test score for admittance to the program. If students do not achieve 78 or higher, they may take Anoka Technical College READ0960 or ATC READ0900 achieving a C or higher for admittance to the program.

Course Prerequisites

See Credits:
- [A] The prerequisite to ADSC1010 Keyboarding I is ADSC1003 Introduction to Keyboarding and Speedbuilding.
- [B] The prerequisite to ADSC1021 Keyboarding II is ADSC1010 Keyboarding I.

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Administrative assistants perform a full range of office tasks. They use a variety of software packages (word processing, spreadsheets, databases, graphics, desktop publishing, multi-media, etc.) to creates, record, edit, and store correspondence, reports, tables and forms from many sources.

They may also read and route incoming mail, file and retrieve correspondence and other records manually or electronically, transcribe business correspondence from machine dictation, answer telephones and give information to callers or route calls to the appropriate individual, operate copying and faxing equipment, perform bookkeeping duties, transactions and make travel arrangements.

In some offices, administrative support specialists may be responsible for one or two of these areas. In a small office, they may be responsible for all of them.

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Credits: 45 Credits

☐ ADSC 1003	Introduction to Keyboarding & Speedbuilding	...	2
☐ ADSC 1010	Keyboarding I [A]	...	3
☐ ADSC 1021	Keyboarding II [B]	...	3
☐ ADSC 1031	Business English Skills	...	3
☐ ADSC 1045	Administrative Office Procedures	...	4
☐ ADSC 1054	Office Bookkeeping	...	4
☐ ADSC 1142	Integrated Software Applications	...	4
☐ ADSC 1162	Microsoft PowerPoint	...	2

ANOKA TECHNICAL COLLEGE
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Administrative Specialist
Associate of Applied Science (AAS) Degree

☐ ADSC 1171   Microsoft Excel 2
☐ ADSC 1181   Microsoft Access 2
☐ ADSC 1197   Microsoft Word... 4
☐ ADSC 1206   Written Business Communications...................... 4
☐ ADSC 1451   Technology Tools for the Workplace 3
☐ SMGT 2602   Project Management 3
Electives **2**
Choose any two (2) credit Supervisory Management course

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:
☐ INTS 1000 Critical Thinking Application for College............... 3
☐ Choose 12 credits from MnTC from THREE different MnTC goal areas
Also see: Administrative Specialist diploma and Administrative Specialist certificate

Start Dates

Fall Semester.. ....August
Spring Semester .... January

Faculty Contact

Darla Cullen 763-576-4018
Deb Catlett... 763-576-4025

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	Fall Semester		Spring Semester	
	ADSC 1003	2	ADSC 1010 [A]	3
	ADSC 1031	3	ADSC 1181	2
	ADSC 1054	4	ADSC 1206	4
	ADSC 1197	4	ADSC 1451	3
	INTS 1000	3	SMGT Elective	2
	TOTAL	**16**	**TOTAL**	**14**

2nd YEAR	Fall Semester		Spring Semester	
	ADSC 1021 [B]	3	ADSC 1142	4
	ADSC 1045	4	SMGT 2602	3
	ADSC 1162	2	General Ed/MnTC	8
	ADSC 1171	2	**TOTAL**	**15**
	General Ed/MnTC	4		
	TOTAL	**15**		

[A] *and* [B]*: See Course Prerequisites*

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Administrative Specialist
Diploma

Technical Requirements................42
General Education/MnTC 3
Total Credits 45

Program Information

The Anoka Technical College Administrative Specialist diploma is a 45-credit program that prepares students with the broad range of technical and communications skills needed for success in today's office work environment. Students will gain competence in word processing, spreadsheet, database, and presentation software. Keyboarding speed and accuracy is developed while grammar, punctuation and writing skills are polished. Students study bookkeeping theory and learn general ledger software in order to prepare them for general bookkeeping or accounts receivable or accounts payable positions. Students are well prepared to fulfill any office support position and may advance to office management.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.

1. Exhibit effective interpersonal skills and professional attitudes by demonstrating the ability to communicate with authority figures and peers; follow work rules and expectations appropriately; maintain confidentiality; and recognize an appropriate business appearance.
2. Demonstrate the ability to express thoughts clearly, concisely, and appropriately in verbal and written format by consistently using correct mechanics, grammar, format, and message approach (direct, indirect).
3. Demonstrate the use of critical thinking skills to analyze and solve business problems by demonstrating the ability to define problems, find relevant information, synthesize and evaluate information, and implement decisions.
4. Exhibit technical competency in keyboarding by demonstrating keyboarding skill proficiency of 45 wpm on a five-minute timing for degrees and diplomas and knowledge of correct document formatting.
5. Demonstrate technical competency by utilizing a wide range of software applications necessary for business office operations; demonstrates initiative in learning to use new technology, and applies new technology accurately in office settings.
6. Demonstrate knowledge of roles and functions of various professionals; collaborate and problem-solve as part of the office team.
7. Demonstrate ability to set priorities, organize work, and sequence tasks appropriately, and consistently complete projects on a schedule.
8. Demonstrate the ability to perform mathematical calculations necessary in business applications including accounting, by working with percentages; decimals and fractions; understanding accounting principles as they are applied to business office bookkeeping; and using formulas for creating spreadsheets and databases.
9. Develop and evaluate customer service skills by ascertaining the characteristics of a customer service organization and using customer service skills in servicing customers professionally.

Admission Requirements

Students are required to have an Accuplacer reading score of 78 or higher or appropriate test score for admittance to the program. If students do not achieve 78 or higher, they may take ATC READ0960 or ATC READ0900 achieving a C or higher for admittance to the program.

Course Prerequisites

See Credits:
[A]   The prerequisite to ADSC1010 Keyboarding I is ADSC1003 Introduction to Keyboarding and Speedbuilding.
[B]   The prerequisite to ADSC1021 Keyboarding II is ADSC1010 Keyboarding I.

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
*   Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
*   Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Administrative assistants perform a full range of office tasks. They use a variety of software packages (word processing, spreadsheets, databases, graphics, desktop publishing, multi-media, etc.) to creates, record, edit, and store correspondence, reports, tables and forms from many sources.

They may also read and route incoming mail, file and retrieve correspondence and other records manually or electronically, transcribe business correspondence from machine dictation, answer telephones and give information to callers or route calls to the appropriate individual, operate copying and faxing equipment, perform bookkeeping duties, transactions and make travel arrangements.

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

ANOKA TECHNICAL COLLEGE
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2018-2019
Administrative Specialist
Diploma

Technical Credits: 42 Credits

☐ ADSC 1003   Introduction to Keyboarding & Speedbuilding ... 2
☐ ADSC 1010   Keyboarding I [A] 3
☐ ADSC 1021   Keyboarding II [B] 3
☐ ADSC 1031   Business English Skills 3
☐ ADSC 1045   Administrative Office Procedures 4
☐ ADSC 1054   Office Bookkeeping 4
☐ ADSC 1142   Integrated Software Applications 4
☐ ADSC 1162   Microsoft PowerPoint 2
☐ ADSC 1171   Microsoft Excel 2
☐ ADSC 1181   Microsoft Access 2
☐ ADSC 1197   Microsoft Word 4
☐ ADSC 1206   Written Business Communications 4
☐ ADSC 1451   Technology Tools for the Workplace 3
Electives ....2 Credits
Choose any two (2) credit Supervisory Management class
Also see: Administrative Specialist AAS & Administrative Specialist Certificate

General Education/MnTC Requirements: 3 Credits

☐ INTS 1000 Critical Thinking Application for College 3

Gainful Employment

Follow this link for a Gainful Employment Report.

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Darla Cullen 763-576-4018
Deb Catlett 763-576-4025

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester		Spring Semester	
1st YEAR	ADSC 1003	2	ADSC 1010 [A]	3
	ADSC 1031	3	ADSC 1142	4
	ADSC 1054	4	ACCT 1181	2
	ADSC 1197	4	ADSC 1206	4
	INTS 1000	3	ADSC 1451	3
	TOTAL	**16**	**TOTAL**	**16**

	Fall Semester			
2nd YEAR	ADSC 1021 [B]	3		
	ADSC 1045	4		
	ADSC 1162	2		
	ADSC 1171	2		
	SMGT Elective	2		
	TOTAL	**13**		

A and B: See Course Prerequisites

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Administrative Specialist
Certificate

Technical Requirements................24
General Education/MnTC 3
Total Credits 27

Program Information

The Anoka Technical College Administrative Specialist certificate is a 27-credit program that prepares students with the broad range of technical and communications skills needed for success in today's office work environment. Students gain competence in word processing, spreadsheet, database, and presentation software. Keyboarding speed and accuracy is developed while grammar, punctuation and writing skills are polished. Students study bookkeeping theory and learn general ledger software in order to prepare them for general bookkeeping or accounts receivable or accounts payable positions.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.

1. Exhibit effective interpersonal skills and professional attitudes by demonstrating the ability to communicate with authority figures and peers; follow work rules and expectations appropriately; maintain confidentiality; and recognize an appropriate business appearance.
2. Demonstrate the ability to express thoughts clearly, concisely, and appropriately in verbal and written format by consistently using correct mechanics, grammar, format, and message approach (direct, indirect).
3. Demonstrate the use of critical thinking skills to analyze and solve business problems by demonstrating the ability to define problems, find relevant information, synthesize and evaluate information, and implement decisions.
4. Exhibit technical competency in keyboarding by demonstrating keyboarding skill proficiency of 45 wpm on a five-minute timing for degrees and diplomas and knowledge of correct document formatting.
5. Demonstrate technical competency by utilizing a wide range of software applications necessary for business office operations; demonstrates initiative in learning to use new technology, and applies new technology accurately in office settings.
6. Demonstrate knowledge of roles and functions of various professionals; collaborate and problem-solve as part of the office team.
7. Demonstrate ability to set priorities, organize work, and sequence tasks appropriately, and consistently complete projects on a schedule.
8. Demonstrate the ability to perform mathematical calculations necessary in business applications including accounting, by working with percentages; decimals and fractions; understanding accounting principles as they are applied to business office bookkeeping; and using formulas for creating spreadsheets and databases.
9. Develop and evaluate customer service skills by ascertaining the characteristics of a customer service organization and using customer service skills in servicing customers professionally.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Administrative assistants perform a full range of office tasks. They use a variety of software packages (word processing, spreadsheets, databases, graphics, desktop publishing, multi-media, etc.) to creates, record, edit, and store correspondence, reports, tables and forms from many sources.

They may also read and route incoming mail, file and retrieve correspondence and other records manually or electronically, transcribe business correspondence from machine dictation, answer telephones and give information to callers or route calls to the appropriate individual, operate copying and faxing equipment, perform bookkeeping duties, transactions and make travel arrangements. In some offices, administrative support specialists may be responsible for one or two of these areas. In a small office, they may be responsible for all of them.

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Credits: 24 Credits

- ☐ ADSC 1003   Introduction to Keyboarding & Speedbuilding ... 2
- ☐ ADSC 1031   Business English Skills.. 3
- ☐ ADSC 1054   Office Bookkeeping 4
- ☐ ADSC 1162   Microsoft PowerPoint 2
- ☐ ADSC 1171   Microsoft Excel 2
- ☐ ADSC 1197   Microsoft Word 4
- ☐ ADSC 1206   Written Business Communications...................... 4
- ☐ ADSC 1451   Technology Tools for the Workplace 3

Also see: Administrative Specialist AAS & Administrative Specialist Diploma

General Education/MnTC Requirements: 3 Credits

- ☐ INTS 1000 Critical Thinking Application for College............... 3

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Administrative Specialist
Certificate

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Darla Cullen 763-576-4018
Deb Catlett..763-576-4025

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	First Semester		Second Semester	
	ADSC 1031	3	ADSC 1003	2
	ADSC 1054	4	ADSC 1171	2
	ADSC 1162	2	ADSC 1206	4
	ADSC 1197	4	ADSC 1451	3
	INTS 1000	3	**TOTAL**	**11**
	TOTAL	**16**		

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Legal Administrative Assistant
Associate of Applied Science (AAS) Degree

Technical Requirements.............44
General Education/MnTC 16
Total Credits 60

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Legal Administrative Assistant is a 60-credit program that consists of a core of general administrative courses, designed to develop basic skills, and additional credits of specialized legal courses.

In addition to basic keyboarding, accounting, and English language skills, the legal administrative assistant student will receive training in computer operations and legal software, legal transcription and document preparation.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes:

1. Communicate effectively, think critically to solve problems, interact in complex environments, and other general education competencies needed for success in careers.
2. Demonstrate competency in creating letters and legal documents, including the use of Microsoft Word.
3. Demonstrate the requisite skills for employment as defined by NALS and the LAA Program Advisory committee. The LAA Program will deliver an industry-validated technical education LAA curriculum.
4. Successfully fulfill their internship at the legal host sites.
5. Be employed in a related job or continue their education in the legal field.

Admission Requirements

Students are required to have an Accuplacer reading score of 78 or higher or appropriate test score for admittance to the program. If students do not achieve 78 or higher, they may take ATC READ0960 or ATC READ0900 achieving a C or higher for admittance to the program.

Course Prerequisites

See Credits:
[A] The prerequisite to ADSC1010 Keyboarding I is ADSC1003 Introduction to Keyboarding and Speedbuilding.

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

As a legal administrative assistant, you will work for lawyers in private law firms, governmental offices, legal departments of corporations, court houses, legal aid offices, or the offices of county attorneys or public defenders. The legal administrative assistant functions as an assistant to the lawyer or judge.

Duties may include preparing legal documents, billing and accounting, processing correspondence, transcribing, communicating with clients, utilizing a variety of software, and organizing and managing a busy legal practice.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 44 Credits

☐ ADSC 1003	Introduction to Keyboarding and Speedbuilding	2
☐ ADSC 1006	Business Law	4
☐ ADSC 1010	Keyboarding I [A]	3
☐ ADSC 1031	Business English Skills	3
☐ ADSC 1054	Office Bookkeeping	4
☐ ADSC 1064	Government, Courts and Criminal Law	3
☐ ADSC 1075	Corporate Law, Collections and Bankruptcy	3
☐ ADSC 1085	Probate and Real Estate Law	4
☐ ADSC 1095	Family Law and Civil Litigation	4
☐ ADSC 1100	Legal Research, Citations, and Office Procedures	4
☐ ADSC 1111	Legal Transcription	2
☐ ADSC 1135	Legal Admin. Assistant Internship	2
☐ ADSC 1171	Microsoft Excel	2
☐ ADSC 1197	Microsoft Word	4

General Education/MnTC Requirements: 16 Credits

Sixteen (16) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:

☐ ENGL 1107	Composition I	4

OR

☐ ENGL 2105	Business and Technical Writing	4
☐ INTS 1000	Critical Thinking Applications for College	3
☐ General Education/MnTC courses		9

Also see: Legal Administrative Assistant diploma and Legal Administrative Assistant certificate

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Legal Administrative Assistant

Associate of Applied Science (AAS) Degree

Start Dates

Fall Semester... August
Spring Semester .... January
Summer Semester .... May

Faculty Contact

Deborah Allen.. 763-576-4024

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	Fall Semester		Spring Semester	
	ADSC 1003	2	ADSC 1006	4
	ADSC 1010	3	ADSC 1054	4
	ADSC 1031	3	ADSC 1197	4
	ADSC 1064	3	ENGL 1107 or 2105	4
	INTS 1000	3	**TOTAL**	**16**
	TOTAL	**14**		

2nd YEAR	Fall Semester		Spring Semester	
	ADSC 1075	3	ADSC 1095	4
	ADSC 1085	4	ADSC 1100	4
	ADSC 1111	2	ADSC 1135	2
	ADSC 1171	2	Gen Ed/MnTC	5
	Gen Ed/MnTC	4	**TOTAL**	**15**
	TOTAL	**15**		

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Legal Administrative Assistant

Diploma

Technical Requirements 44
General Education/MnTC 7
Total Credits 51

Program Information

The Anoka Technical College Legal Administrative Assistant diploma is a 51-credit online program that consists of technical legal specialty courses plus a core of general education classes designed to develop basic skills.

This online program combines basic administrative assistant courses with specialized legal courses to provide graduates a broad based skill set for success in the work place.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes:

1. Communicate effectively, think critically to solve problems, interact in complex environments, and other general education competencies needed for success in careers.
2. Demonstrate competency in creating letters and legal documents, including the use of Microsoft Word.
3. Demonstrate the requisite skills for employment as defined by NALS and the LAA Program Advisory committee. The LAA Program will deliver an industry-validated technical education LAA curriculum.
4. Successfully fulfill their internship at the legal host sites.
5. Be employed in a related job or continue their education in the legal field.

Admission Requirements

Students are required to have an Accuplacer reading score of 78 or higher or appropriate test score for admittance to the program. If students do not achieve 78 or higher, they may take ATC READ0960 or ATC READ0900 achieving a C or higher for admittance to the program.

Course Prerequisites

See Credits:
[A] The prerequisite to ADSC1010 Keyboarding I is ADSC1003 Introduction to Keyboarding and Speedbuilding.

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

As a legal administrative assistant, you will work for lawyers in private law firms, governmental offices, legal departments or corporations, court houses, legal aid offices, or the offices of county attorneys or public defenders. The legal administrative assistant functions as an assistant to the lawyer or judge.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for Gainful Employment Report.

Technical Education: 44 Credits

☐ ADSC 1003   Introduction to Keyboarding and Speedbuilding 2
☐ ADSC 1006   Business Law 4
☐ ADSC 1010   Keyboarding I [A] 3
☐ ADSC 1031   Business English Skills 3
☐ ADSC 1054   Office Bookkeeping 4
☐ ADSC 1064   Government, Courts, and Criminal Law 3
☐ ADSC 1075   Corporate Law, Collections and Bankruptcy 3
☐ ADSC 1085   Probate and Real Estate Law 4
☐ ADSC 1095   Family Law and Civil Litigation 4
☐ ADSC 1100   Legal Research, Citations and Office Procedures 4
☐ ADSC 1111   Legal Transcription 2
☐ ADSC 1171   Microsoft Excel 2
☐ ADSC 1197   Microsoft Word 4
☐ Technical Elective.. 2

General Education/MnTC Requirements: 7 Credits

Seven (7) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:
☐ ENGL 1107   Composition I 4
OR
☐ ENGL 2105   Business and Technical Writing........................... 4
☐ INTS 1000   Critical Thinking Applications for College 3
Also see: Legal Administrative Assistant AAS degree and Legal Administrative Assistant certificate

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019

Legal Administrative Assistant

Diploma

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Deborah Allen 763-576-4024

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequenc
Full Time

1ST YEAR

First Semester		Second Semester	
ADSC 1003	2	ADSC 1006	4
ADSC 1010	3	ADSC 1111	2
ADSC 1031	3	ADSC 1171	2
ADSC 1064	3	ADSC 1197	4
INTS 1000	3	**TOTAL**	**12**
TOTAL	**14**		

2ND YEAR

Third Semester		Fourth Semester	
ADSC 1054	4	ADSC 1100	4
ADSC 1075	3	ADSC 1095	4
ADSC 1085	4	ENGL 1107 or 2105	4
Technical Elective	2	**TOTAL**	**12**
TOTAL	**13**		

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Legal Administrative Assistant

Certificate

Technical Requirements.............14
General Education/MnTC 3
Total Credits 17

Program Information

The Anoka Technical College Legal Administrative Assistant certificate is a 17-credit online program that consists of administrative support career and legal specialty courses to provide graduates a specialty area in law for success in the workplace.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes:

1. Illustrate proficiency in use of Microsoft Excel.
2. Demonstrate knowledge of keyboard.
3. Compose legal correspondence and legal documents.
4. Employ Microsoft Word.
5. Recognize legal terminology.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Legal Administrative Assistants support lawyers in private law firms, government offices, legal departments of corporations, courthouses, legal aid offices, or the offices of county attorneys, public defenders, and judges. Duties may include preparing legal documents, processing correspondence, transcribing, communicating with clients, and utilizing a variety of software.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for Gainful Employment Report.

Technical Education: 14 Credits

☐ ADSC 1003   Introduction to Keyboarding and Speedbuilding 2
☐ ADSC 1111   Legal Transcription 2
☐ ADSC 1171   Microsoft Excel 2
☐ ADSC 1197   Microsoft Word 4
Electives 4
☐ ADSC 1006   Business Law 4
☐ ADSC 1100   Legal Research, Citations and Office Procedures 4
☐ ADSC 1085   Probate and Real Estate Law 4
☐ ADSC 1095   Family Law and Civil Litigation 4
Also see: Legal Administrative Assistant AAS degree and diploma

General Education/MnTC Requirements: 3 Credits

Three (3) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:
☐ INST 1000   Critical Thinking Applications for College 3

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Deborah Allen 763-576-4024

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	First Semester	
	ADSC 1003 2	
	ADSC 1111 2	
	ADSC 1171 2	
	ADSC 1197 4	
	Elective 4	
	INTS 1000........................... 3	
	TOTAL 17	

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Supervisory Management
Associate of Applied Science (AAS) Degree

Technical Requirements.................45
General Education/MnTC 15
Total Credits 60

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Supervisory Management is a 60-credit program that includes certificates in Supervisory Leadership, Human Resource Development and Quality Supervision. The certificates are the building blocks of the AAS degree. Each certificate can stand alone or the three certificates can be combined with 15 general education credits, for a total of 60 credits needed for the AAS degree. The certificate and degree requirements are listed.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply effective diversity strategies in the workplace.
2. Demonstrate analytical skills in identifying and solving problems.
3. Develop and implement change strategies.
4. Understand contemporary behavior and apply human relations skills.
5. Demonstrate leadership skills and identify approaches to motivation and achieve a productive work environment.
6. Apply marketing, management, and organizational theories in a supervisory setting.
7. Apply human resource management practices.
8. Plan, prepare, and deliver effective oral and written communications.
9. Demonstrate financial management skills.
10. Utilize current technology.
11. Apply strategies for customer-focused decisions to individual supervisory responsibilities—service, quality, and productivity.
12. Demonstrate administrative management skills.
13. Exercise creativity and innovation.
14. Demonstrate interpersonal communication skills.
15. Understand the opportunities and challenges of globalization.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The supervisory field covers all areas of the private and public sector. Business and industry consistently seek out qualified employees who can move into the supervisory ranks. Anoka Technical College's Supervisory Management program prepares individuals to perform successfully as supervisors.

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 45 Credits

Human Resources Development Certificate............................. 15
☐ SMGT 1612　Human Resources Management 3
☐ SMGT 1614　Performance Management 3
☐ SMGT 1616　Employment Law 2
☐ SMGT 1618　Employee Training & Coaching 3
☐ SMGT 1620　Work Teams & Facilitation Skills 2
☐ SMGT 1622　Field Study II 2
Quality Supervision Certificate 16
☐ SMGT 1624　Quality Tools & Creativity 3
☐ SMGT 1626　Management of Safety 2
☐ SMGT 1628　Documentation/Written Communication Skills .. 2
☐ SMGT 1630　Field Study III 2
☐ SMGT 2600　Accounting for Non-Financial Managers 2
☐ SMGT 2602　Project Management/Problem Solving 3
☐ SMGT 2604　Leadership Development 2
Supervisory Leadership Certificate.. 14
☐ SMGT 1600　Management Education Planning 2
☐ SMGT 1602　Supervision Fundamentals 3
☐ SMGT 1604　Interpersonal Skills/Customer Service 2
☐ SMGT 1606　Managing Change & Conflict 2
☐ SMGT 1608　Personal Leadership 3
☐ SMGT 1610　Field Study I 2

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to select classes from three or more MnTC goal areas.
☐ General Education/MnTC Courses.. 15
Refer to Anoka Technical College website for a list of MnTC courses and goal areas.
Also see: Human Resources Development certificate, Supervisory Leadership certificate ,and Quality Supervision certificate

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Supervisory Management
Associate of Applied Science (AAS) Degree

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Nick Hockert.. 763-576-4195
Frank Plachecki...763-576-4157

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
*Courses are only offered certain semesters.

*Fall Semester		*Spring Semester	
SMGT 1600	2	SMGT 1606	2
SMGT 1602	3	SMGT 1608	3
SMGT 1604	2	SMGT 1610	2
SMGT 1612	3	SMGT 1616	2
SMGT 1614	3	SMGT 1618	3
SMGT 1622	2	SMGT 1620	2
SMGT 1624	3	SMGT 1628	2
SMGT 1626	2	SMGT 1630	2
SMGT 2600	2	SMGT 2602	3
		SMGT 2604	2

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Human Resources Development
Certificate

Total Technical Credits...............15

Program Information

The Anoka Technical College Human Resource Development certificate is a 15-credit program that can stand alone or can be combined with the Quality Supervision certificate, the Supervisory Leadership certificate and 15 general education credits for a total of 60 credits to complete the Associate of Applied Science (AAS) degree in Supervisory Management.

Course Prerequisites

None.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The human resources field covers all areas of the private and public sector. Business and industry consistently seek out qualified employees who can move into the supervisory ranks. Anoka Technical College's Supervisory Management program prepares individuals to perform successfully as supervisors.

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 15 Credits

☐ SMGT 1612 Human Resources Management 3
☐ SMGT 1614 Performance Management 3
☐ SMGT 1616 Employment Law 2
☐ SMGT 1618 Employee Training & Coaching 3
☐ SMGT 1620 Work Teams & Facilitation Skills 2
☐ SMGT 1622 Field Study II 2

Also see: Supervisory Management AAS, Supervisory Leadership certificate, and Quality Supervision certificate

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Nick Hockert...763-576-4195
Frank Plachecki..763-576-4157

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence

*Courses are only offered certain semesters.

	*Fall Semester		*Spring Semester	
1st YEAR	SMGT 1612.........................3		SMGT 1616.........................2	
	SMGT 1614 3		SMGT 1618 3	
	TOTAL 6		SMGT 1620.........................2	
			SMGT 1622.........................2	
			TOTAL 9	

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Quality Supervision
Certificate

Total Technical Credits...............16

Program Information

The Anoka Technical College Quality Supervision certificate is a 16-credit program that can stand alone or can be combined with the Human Resource Development certificate, the Supervisory Leadership certificate and 15 general education credits for a total of 60 credits to complete the Associate of Applied Science (AAS) degree in Supervisory Management.

Course Prerequisites

None.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The supervisory field covers all areas of the private and public sector. Business and industry consistently seek out qualified employees who can move into the supervisory ranks. Anoka Technical College's Supervisory Management program prepares individuals to perform successfully as supervisors.

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment report.

Technical Education: 16 Credits

☐ SMGT 1624 Quality Tools & Creativity 3
☐ SMGT 1626 Management of Safety 2
☐ SMGT 1628 Documentation/Written Communication Skills ..2
☐ SMGT 1630 Field Study III 2
☐ SMGT 2600 Accounting for Non-Financial Managers 2
☐ SMGT 2602 Project Management/Problem Solving 3
☐ SMGT 2604 Leadership Development 2

Also see: Supervisory Management AAS degree, Supervisory Leadership certificate, and Human Resources Development certificate

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Nick Hockert...763-576-4195
Frank Plachecki..763-576-4157

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence

*Courses are only offered certain semseters.

	*Fall Semester		*Spring Semester	
1st YEAR	SMGT 1624.........................3		SMGT 1628.........................2	
	SMGT 1626.........................2		SMGT 1630.........................3	
	SMGT 2600 2		SMGT 2602.........................2	
			SMGT 2604 2	
	TOTAL 7		**TOTAL 9**	

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Program Information

The Anoka Technical College Supervisory Leadership certificate is a 14-credit program that can stand alone or can be combined with the Human Resource Development and Quality Supervision certificates and 15 general education credits for a total of 60 credits to complete the Associate of Applied Science (AAS) degree in Supervisory Management.

Course Prerequisites

None.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The supervisory field covers all areas of the private and public sector. Business and industry consistently seek out qualified employees who can move into the supervisory ranks. Anoka Technical College's Supervisory Management program prepares individuals to perform successfully as supervisors.

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 14 Credits

☐ SMGT 1600   Management Education Planning 2
☐ SMGT 1602   Supervision Fundamentals 3
☐ SMGT 1604   Interpersonal Skills/Customer Service 2
☐ SMGT 1606   Managing Change & Conflict 2
☐ SMGT 1608   Personal Leadership 3
☐ SMGT 1610   Field Study I 2

Also see: Supervisory Management AAS degree, Human Resources Development certificate, and Quality Supervision certificate

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Nick Hockert.. 763-576-4195
Frank Plachecki.. 763-576-4157

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
*Courses are only offered certain semesters.

	*Fall Semester	*Spring Semester
1st YEAR	SMGT 1600......................2	SMGT 1606.......................2
	SMGT 1602......................3	SMGT 1608.......................3
	SMGT 1604......................2	**TOTAL 5**
	SMGT 1610 2	
	TOTAL 9	

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Automotive Technology

Automotive Technician

Associate of Applied Science (AAS) Degree

Technical Requirements.............57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical College Automotive Technician Associate of Applied Science (AAS) degree is intended for advanced individuals who are looking for additional possibilities in their automotive future. This is a 72-credit program not only provides an individual with an entry level career in the automotive service industry, it can also increase future educational or career options. The general education credits contained within the AAS can lead to leadership positions within the industry as well as act as a stepping stone to a Bachelor of Arts (BA) degree in Engineering or Business Management.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.

1. Develop the knowledge and demonstrate an understanding of automotive related systems, components, terminology and acronyms.
2. Develop and demonstrate knowledge, skills, and attitudes essential to the automotive repair industries expectations of performance.
3. Demonstrate the ability to utilize computer and non-computer based vehicle service information systems.
4. Use automotive tools, shop and test equipment, materials, and chemicals safely and effectively.
5. Develop critical and creative thinking processes required to effectively and efficiently diagnose and repair vehicle technical problems.

Admission Requirements

Successful completion of the Automotive diploma or instructor approval.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

For insurance purposes, internships may require that students be 18 years old for the automotive program. Students must also possess a valid driver's license.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

With more than 230,000,000 light-duty cars and trucks on the road in the United States alone, there will always be jobs for qualified technicians. One of the automotive technician's most in-demand and valuable skills is the ability to make a quick and accurate problem diagnosis. This requires a thorough knowledge and understanding of light-duty vehicles and their systems. Good reasoning abilities and critical thinking along with the ability to locate and understand vehicle service information is also important. Daily, the technician will rely on computerized service information to locate system theory of operation, diagnostic and troubleshooting procedures, specifications, repair procedures and technical service bulletins as they service customer vehicles. It may be necessary to provide accurate repair estimates and communicate with customers and co-workers.

Many technicians will perform a variety of repairs while others will seek additional training in order to specialize. Areas of specialization include the diagnosis and repair of engines or transmissions, electrical systems, drivability or performance (fuel and ignition), air conditioning, suspension systems and wheel alignment. Due to the ever increasing use of electronics and new technology in the vehicles of the future, the ability to adapt and continue learning will be very important.

The AAS degree can accelerate career opportunities and lead to many other related paths within the automotive service/sales area including merchandising, parts and vehicle sales. Experienced technicians who are able to communicate well with customers may become service advisors. Those with leadership abilities may advance to supervisory or management positions and manufacturer representatives. Some may elect to open their own repair shops or seek additional education in engineering or business management.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 57 Credits

☐ AUTO 1000	Orientation and Safety	1
☐ AUTO 1010	General Auto Service	2
☐ AUTO 1167	Vehicle Electronics	5
☐ AUTO 2005	Supervised Internship I	2
☐ AUTO 2006	Supervised Internship II	2
☐ AUTO 2007	Supervised Internship III	2
☐ AUTO 2119	Engine Repair and Service	6
☐ AUTO 2129	Automatic Transmission Condition	6
☐ AUTO 2135	Manual Drive Train System and Service	4
☐ AUTO 2145	Suspension and Steering System Service	4
☐ AUTO 2159	Brake System and Service	4
☐ AUTO 2164	Chassis Electrical Systems	3
☐ AUTO 2166	Starting and Charging Systems	2
☐ AUTO 2175	Automotive Climate Control and Service	4
☐ AUTO 2183	Fuel and Ignition Management Systems	6
☐ AUTO 2187	Automotive Computer Systems and Driveability	4

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Automotive Technician
Associate of Applied Science (AAS) Degree

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take the following courses:
- ☐ ENGL 1107   Composition I 4
- ☐ MATH 1500 Mathematical Ideas 3
- ☐ SOSC 2000   Sociology of Work 4

MnTC General Education Elective 4

Also see: Automotive Technician diploma

Start Dates

Fall Semester...August

Faculty Contact

Dave Holmquist.. 763-576-4187
Dave Larson 763-576-4019

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR

Fall Semester		Spring Semester	
AUTO 1000	1	AUTO 2005	2
AUTO 1010	2	AUTO 2164	3
AUTO 1167	5	AUTO 2166	2
AUTO 2145	4	AUTO 2183	6
AUTO 2159	4	MATH 1500	3
		General Ed/MnTC	4
TOTAL	**16**	**TOTAL**	**20**

2nd YEAR

Fall Semester		Spring Semester	
AUTO 2006	2	AUTO 2007	2
AUTO 2119	6	AUTO 2135	4
AUTO 2129	6	AUTO 2175	4
ENGL 1107	4	AUTO 2187	4
		SOSC 2000	4
TOTAL	**18**	**TOTAL**	**18**

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Automotive Technician
Diploma

Technical Requirements 57
General Ed/MnTC or Elective ... 3
Total Credits 60

Program Information

The Anoka Technical College Automotive Technician diploma is a 60-credit program that prepares graduates for an entry level career in the automotive service industry. Most entry level automotive technicians start as tire or lube techs. Within a few months they will be performing many routine service tasks and perform simple repairs. It usually takes two to five years of on-the-job training to become a journey-level technician. This means that the technician is skilled enough to perform difficult repairs. However, graduates of a college-level training program are often able to advance to that level in a shorter period of time.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Develop the knowledge and demonstrate an understanding of automotive related systems, components, terminology and acronyms.
2. Develop and demonstrate knowledge, skills, and attitudes essential to the automotive repair industries expectations of performance.
3. Demonstrate the ability to utilize computer and non-computer based vehicle service information systems.
4. Use automotive tools, shop and test equipment, materials, and chemicals safely and effectively.
5. Develop critical and creative thinking processes required to effectively and efficiently diagnose and repair vehicle technical problems.

Admission Requirements

Accuplacer Reading score must be 50 or better to be accepted into the program.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

For insurance purposes, internships may require that students be 18 years old for the automotive program. Students must also possess a valid driver's license.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
*   Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

*   Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

With more than 230,000,000 light-duty cars and trucks on the road in the United States alone, there will always be jobs for qualified technicians. One of the automotive technician's most in-demand and valuable skills is the ability to make a quick and accurate problem diagnosis. This requires a thorough knowledge and understanding of light-duty vehicles and their systems. Good reasoning abilities and critical thinking along with the ability to locate and understand vehicle service information is also important. Daily, the technician will rely on computerized service information to locate system theory of operation, diagnostic and troubleshooting procedures, specifications, repair procedures and technical service bulletins as they service customer vehicles. It may be necessary to provide accurate repair estimates and communicate with customers and co-workers.

Many technicians will perform a variety of repairs while others will seek additional training in order to specialize. Areas of specialization include the diagnosis and repair of engines or transmissions, electrical systems, driveability or performance (fuel and ignition), air conditioning, suspension systems and wheel alignment. Due to the ever increasing use of electronics and new technology in the vehicles of the future, your ability to adapt and continue learning will be very important.

There are many other related career paths within the automotive service/sales area including merchandising, parts and vehicle sales. Experienced technicians who are able to communicate well with customers may become service advisors. Those with leadership abilities may advance to supervisory or management positions and manufacturer representatives. Some may elect to open their own repair shops.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 57 Credits

☐ AUTO 1000	Orientation and Safety		1
☐ AUTO 1010	General Automotive Service		2
☐ AUTO 1167	Vehicle Electronics		5
☐ AUTO 2005	Supervised Internship I		2
☐ AUTO 2006	Supervised Internship II		2
☐ AUTO 2007	Supervised Internship III		2
☐ AUTO 2119	Engine Repair and Service		6
☐ AUTO 2129	Automatic Transmission Condition		6
☐ AUTO 2135	Manual Drive Train System and Service		4
☐ AUTO 2145	Suspension and Steering System Service		4
☐ AUTO 2159	Brake System and Service		4
☐ AUTO 2164	Chassis Electrical Systems		3
☐ AUTO 2166	Starting and Charging Systems		2
☐ AUTO 2175	Automotive Climate Control and Services		4

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019

Automotive Technician
Diploma

☐ AUTO 2183   Fuel and Ignition Management Systems 6
☐ AUTO 2187   Automotive Computer Systems and Driveability 4

Select three (3) credits from the following electives OR three (3) General Education/MnTC credits:
☐ AUTO 2130 Advanced Engine & Auto Transmission Diagnosis 3
☐ AUTO 2450   Fundamental Welding for Automotive.................3

General Education/MnTC Electives: 3 Credits

Select three (3) credit technical electives or three (3) General Education/MnTC credits:
☐ General Education/MnTC 3
Also see: Automotive Technician AAS

Start Dates

Fall Semester...August

Faculty Contact

Dave Holmquist..763-576-4187
Dave Larson 763-576-4019

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester		Spring Semester	
1st YEAR	AUTO 1000	1	AUTO 2005	2
	AUTO 1010	2	AUTO 2164	3
	AUTO 1167	5	AUTO 2166	2
	AUTO 2145	4	AUTO 2183	6
	AUTO 2159	4	**TOTAL**	**13**
	TOTAL	**16**		
2nd YEAR	Fall Semester		Spring Semester	
	AUTO 2006	2	AUTO 2007	2
	AUTO 2119	6	AUTO 2135	4
	AUTO 2129	6	AUTO 2175	4
	General Ed/MnTC OR		AUTO 2187	4
	AUTO 2130 OR 2450	3	**TOTAL**	**14**
	TOTAL	**17**		

ANOKA TECHNICAL COLLEGE
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Engineering, Manufacturing & Technology

Architectural Technology

Associate of Applied Science (AAS) Degree

Technical Requirements 45
General Education/MnTC 15
Total Credits 60

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Architectural Technology is a 60-credit program. The program consists of technical courses designed to develop skills which can be applied to a wide variety of careers in the design-construction industry including employment with architectural and engineering firms, residential builders and construction material supplies.

In addition to drafting and detailing skills, the student receive training in related areas such as construction estimating, building codes, building mechanical and electrical systems, as well as emerging technologies in energy-efficient design. Students receive hands-on training in industry standard computer-aided drafting software (AutoCAD and Revit).

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Students will demonstrate residential construction materials and methods knowledge.
2. Students will demonstrate commercial construction materials and methods knowledge.
3. Students will execute program/industry CAD drafting standards for residential construction drawings.
4. Students will execute program/industry CAD drafting standards for commercial construction drawings.
5. Students will demonstrate entry level CAD proficiency for the industry.
6. Students will demonstrate understanding of the roles and responsibilities of an entry level architectural CAD technician.

Course Prerequisites

Some courses may require an appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
* Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

* Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Graduates of the Architectural Technology AAS degree program learn skills and technology which can be applied to a wide variety of careers in the design-construction industry, including employment with architectural and engineering firms, residential builders and construction material suppliers.

Drafters who gain experience and knowledge may become design drafters or senior drafters. With additional training or experience, drafters may also move into related positions, such as technical writer, sales engineer or engineering assistant.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 45 Credits

☐ ARCH 1000	Residential Construction	2
☐ ARCH 1002	Construction Print Reading	2
☐ ARCH 1004	Introduction to Architectural Profession	2
☐ ARCH 1015	Commercial Construction	2
☐ ARCH 1031	Building Systems	2
☐ ARCH 1040	Residential Graphics	1\
☐ ARCH 1043	Architectural CAD I	3
☐ ARCH 1045	Commercial Graphics	1
☐ ARCH 1052	Architectural CAD II	3
☐ ARCH 2005	Residential CAD Studio	4
☐ ARCH 2025	Revit Architectural 3D CAD	2
☐ ARCH 2027	Intermediate Revit 3D CAD	2
☐ ARCH 2029	Advanced Revit 3D CAD	3
☐ ARCH 2055	Commercial CAD Studio	3
☐ ARCH 2070	Commercial Design	2
☐ ARCH 2085	Structural Technology	3
☐ CEST 1000	Construction Estimating I	3
☐ CEST 1010	Construction Estimating II	3
☐ CEST 1030	Project Management for Estimators	2

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:
☐ General Education/MnTC Courses... 15
Refer to the Anoka Technical College Web site for a list of the MnTC goal areas.
Also see: Architectural Technology diploma, Architectural 2D CAD, Construction Estimating certificate and Construction Electrician diploma

ANOKA
TECHNICAL COLLEGE
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2018-2019
Architectural Technology
Associate of Applied Science (AAS) Degree

Start Dates

Fall Semester..August
Spring Semester ....January**

**Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.

Faculty Contact

Jay Boyle...763-576-4056

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence:
*Full Time

1st YEAR	Fall Semester	Spring Semester	
	ARCH 1000 2	ARCH 1004 2	
	ARCH 1002 2	ARCH 1015 2	
	ARCH 1040 1	ARCH 1045 1	
	ARCH 1043........................3	ARCH 1052........................3	
	TOTAL 8	ARCH 2025 2	
		CEST 1030........................2	
		TOTAL 12	

2nd YEAR	Fall Semester	Spring Semester	
	ARCH 2005 4	ARCH 1031 2	
	ARCH 2027 2	ARCH 2029 3	
	ARCH 2070 2	ARCH 2055 3	
	ARCH 2085 3	CEST 1010 3	
	CEST 1000........................3	**TOTAL 11**	
	TOTAL 14		

*Does not include General Education/MnTC credits. Students are required to complete 15 MnTC credits from three different goal areas.

ANOKA
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Program Information

The Anoka Technical College Architectural and Construction Technician diploma is a 45-credit program that consists of skills and technology which can be applied to a wide variety of careers in the design-construction industry including employment with architectural and engineering firms, residential builders, and construction material supplies.

The Architectural and Construction Technology program consists of technical courses designed to develop skills related to the fields of architecture, engineering, contracting, and other design-construction fields.

In addition to drafting and detailing skills, the student receive training in related areas such as construction estimating, building codes, building mechanical and electrical systems, as well as emerging technologies in energy-efficient design. Students receive hands-on training in industry standard computer-aided drafting software (AutoCAD and Revit).

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Students will demonstrate residential construction materials and methods knowledge.
2. Students will demonstrate commercial construction materials and methods knowledge.
3. Students will execute program/industry CAD drafting standards for residential construction drawings.
4. Students will execute program/industry CAD drafting standards for commercial construction drawings.
5. Students will demonstrate entry level CAD proficiency for the industry.
6. Students will demonstrate understanding of the roles and responsibilities of an entry level architectural CAD technician.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
* Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Graduates of the Architectural and Construction Technician diploma program learn skills and technology which can be applied to a wide variety of careers in the design-construction industry, including employment with architectural and engineering firms, residential builders and construction material suppliers.

Drafters who gain experience and knowledge may become design drafters or senior drafters. With additional training or experience, drafters may also move into related positions, such as technical writer, sales engineer, or engineering assistant.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 45 Credits

☐ ARCH 1000   Residential Construction.....................................2
☐ ARCH 1002   Construction Print Reading.................................2
☐ ARCH 1004   Introduction to Architectural Profession..............2
☐ ARCH 1015   Commercial Construction...................................2
☐ ARCH 1031   Building Systems 2
☐ ARCH 1040   Residential Graphics...1\
☐ ARCH 1043   Architectural CAD I 3
☐ ARCH 1045   Commercial Graphics 1
☐ ARCH 1052   Architectural CAD II 3
☐ ARCH 2005   Residential CAD Studio 4
☐ ARCH 2025   Revit Architectural 3D CAD 2
☐ ARCH 2027   Intermediate Revit 3D CAD 2
☐ ARCH 2029   Advanced Revit 3D CAD 3
☐ ARCH 2055   Commercial CAD Studio....................................3
☐ ARCH 2070   Commercial Design 2
☐ ARCH 2085   Structural Technology.......................................3
☐ CEST 1000   Construction Estimating I 3
☐ CEST 1010   Construction Estimating II..................................3
☐ CEST 1030   Project Management for Estimators 2

Also see: Architectural Technology AAS, Architectural 2D CAD, Construction Estimating certificate and Construction Electrician diploma

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Architectural & Construction Technician
Diploma

Start Dates

Fall Semester...August
Spring Semester ....January**

**Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the spring semester.*

Faculty Contact

Jay Boyle.. 763-576-4056

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR

Fall Semester		Spring Semester	
ARCH 1000	2	ARCH 1004	2
ARCH 1002	2	ARCH 1015	2
ARCH 1040	1	ARCH 1045	1
ARCH 1043	3	ARCH 1052	3
TOTAL	**8**	ARCH 2025	2
		CEST 1030	2
		TOTAL	**12**

2nd YEAR

Fall Semester		Spring Semester	
ARCH 2005	4	ARCH 1031	2
ARCH 2027	2	ARCH 2029	3
ARCH 2070	2	ARCH 2055	3
ARCH 2085	3	CEST 1010	3
CEST 1000	3	**TOTAL**	**11**
TOTAL	**14**		

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Architectural 2D CAD
Certificiate

Total Technical Credits...............16

Program Information

The Anoka Technical College Architectural 2D CAD Drafting certificate is a 16-credit program that consists of technical courses designed to develop specific 2D CAD skills related to the fields of architecture, engineering, contracting, and other design-construction fields. Students receive hands-on training in industry standard computer-aided drafting software (AutoCAD).

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Students will demonstrate residential construction materials and methods knowledge.
2. Students will demonstrate commercial construction materials and methods knowledge.
3. Students will execute program/industry 2D CAD drafting standards for residential construction drawings.
4. Students will execute program/industry 2D CAD drafting standards for commercial construction drawings.

Course Prerequisites

None.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Graduates of the Architectural 2D CAD Drafting certificate program learn CAD skills which can be applied to the design-construction industry, including employment with architectural and engineering firms, residential builders, and construction material suppliers. Drafters who gain industry experience and knowledge many become design drafters or senior drafters. With additional training or experience, drafters may also move into related posititons, such as specification writer, sales engineer, or CAD engineering assistant.

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Credits: 16 Credits

☐ ARCH 1000	Residential Construction	2
☐ ARCH 1002	Construction Print Reading	2
☐ ARCH 1004	Introduction to the Architectural Profession	2
☐ ARCH 1015	Commercial Construction	2
☐ ARCH 1040	Residential Graphics	1
☐ ARCH 1043	Architectural CAD I	1
☐ ARCH 1045	Commercial Graphics	3
☐ ARCH 1052	Architectural CAD II	3

Also see: Architectural Technology AAS & Architectural and Construction Technician diploma

Gainful Employment

Follow this link for a Gainful Employment Report.

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Jay Boyle... 763-576-4056

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence:
*Full Time

	Fall Semester		Spring Semester	
1st YEAR	ARCH 1000	2	ARCH 1004	2
	ARCH 1002	2	ARCH 1015	2
	ARCH 1040	1	ARCH 1045	1
	ARCH 1043	3	ARCH 1052	3
	TOTAL	**8**	**TOTAL**	**8**

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Construction Estimating
Certificate

Technical Requirements.............21
General Education/MnTC 5
Total Credits 26

Program Information

The Anoka Technical College Construction Estimating certificate is a 26-credit program that consists of technical courses designed to develop skills relating to the field of construction cost estimating, quantity surveying and building materials. In addition to estimating skills, the student receive training in related areas such as plan reading, residential/commercial construction, specifications, construction scheduling and Computer Aided Drafting (CAD) software.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Construction Print Reading
2. Residential construction materials estimating
3. Commercial construction materials estimating
4. Construction general conditions estimating
5. Computer Estimating

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate of Applied Science (AAS) degree, diploma or certification must meet the grade-point average (GPA) of 2.0 or higher. Please contact your advisor for any further program graduation requirements.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Graduates of the Construction Estimating certificate program learn skills and technology that can be applied to a wide variety of construction industry employers including construction subcontractors, lumber suppliers, home improvement centers and construction material suppliers.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 21 Credits

☐ ARCH 1000 Residential Construction......................................2
☐ ARCH 1002 Construction Print Reading.................................2
☐ ARCH 1015 Commercial Construction 2
☐ ARCH 1031 Building Systems 2
☐ ARCH 1043 Architectural CAD I 3
☐ CEST 1000 Construction Estimating I 3
☐ CEST 1010 Construction Estimating II..................................3
☐ CEST 1020 Computer Estimating 2
☐ CEST 1030 Project Management for Estimators 2

General Education/MnTC Requirements: 5 Credits

Five (5) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:
☐ SPCH 1200 Interpersonal Communications............................3
☐ COMP 1002 Computer Technologies for Communication.......2
Also see: Architectural Technology AAS amd diploma.

Start Dates

Fall Semester...August
Spring Semester ....January**

**Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.*

Faculty Contact

Jay Boyle.. 763-576-4056

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester	Spring Semester
1st YEAR	ARCH 1000 2	ARCH 1015 2
	ARCH 1002 2	ARCH 1031........................2
	ARCH 1043........................3	CEST 1010 3
	CEST 1000.........................3	CEST 1020........................2
	COMP 1002 2	CEST 1030........................2
		SPCH 1200 3
	TOTAL 12	**TOTAL 14**

ANOKA TECHNICAL COLLEGE
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2018-2019
Construction Electrician
Diploma

Technical Requirements 60
General Education/MnTC 12
Total Credits 72

Program Information

The Anoka Technical College Construction Electrician diploma is a 72-credit program designed to develop skills in the installation and testing of electrical fixtures. Students will study wiring, including blueprint reading, wiring code, electrical theory and wiring laboratory. Many graduates of this program join unions to complete their apprenticeship training.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes
1. Work safely amongst others.
2. Troubleshoot electrical circuits using proper technique.
3. Design and install single family dwelling circuits to NEC standards.
4. Design and install commercial and industry circuits to NEC standards.
5. Design and install control circuits to NEC standards.
6. Effectively follow verbal and written instructions.
7. Identify code articles that pertain to the project.

Endorsements

The Construction Electrician diploma is approved by:
• State Board of Electricity
• Twin Cities Joint Apprenticeship Committee,
• Many unions in the upper Midwest including:
  • Local 110 (St. Paul)
  • Local 292 (Minneapolis)
  • Local 343 (Mankato)
  • Local 242 (Duluth)
  • Local 294 (Bemidji and Iron Range)
  • Local 1426 (Fargo, East Grand Forks and Grand Forks)
  • Local 426 (Sioux City, Sioux Falls, Colorado and Kansas)

Course Prerequisites

Although no prior knowledge or experience is necessary to succeed in this program, prospective Construction Electrician students should have a high school diploma or GED. Helpful high school courses include electronics, drafting, carpentry, and algebra/trigonometry. Physical exertion is often required and electrical construction may be performed outdoors or under such conditions as heights, unfinished construction or high voltages.

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

As a construction electrician, program graduates will work with electrical materials on construction and remodeling jobs. More specifically, construction electricians plan, assemble, install and test electrical fixtures, apparatus and wiring that is used in both new and existing buildings. Construction electricians must have complete knowledge of electrical codes, theory and materials in order to correctly install and troubleshoot all types of electrical equipment and controls as required for each type of building.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Experienced electricians who work for large companies have several options for advancement. Those who have good people skills may become supervisors. Those who have good organizational skills may become managers. Construction electricians may transfer to electrical jobs in the shipbuilding, automobile or aircraft industries. Some electricians start their own businesses. Those who have a master electrician's license may become contractors.

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 60 Credits

☐ ELEC 1001   Electrical Theory I 5
☐ ELEC 1020   Residential Wiring Lab I 4
☐ ELEC 1030   National Electrical Code I 2
☐ ELEC 1061   Electrical Theory II 5
☐ ELEC 1080   Residential Wiring Lab II 4
☐ ELEC 1090   National Electrical Code II 3
☐ ELEC 1101   Power Limited 2
☐ ELEC 1107   PLC's and Electronics for Electricians 6
☐ ELEC 1110   Lighting 2
☐ ELEC 1121   Electrical Heating & Air Conditioning 2
☐ ELEC 1130   Plan Reading 2
☐ ELEC 1140   Safety Principles/OSHA I 1
☐ ELEC 1141   Safety/OSHA II 2
☐ ELEC 2010   Commercial Wiring Lab I 3
☐ ELEC 2020   Motors and Controls I 2
☐ ELEC 2030   National Electrical Code III 3

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Construction Electrician
Diploma

☐ ELEC 2040	Three-Phase Electrical Theory.............................4
☐ ELEC 2060	Commercial Wiring Lab II..................................3
☐ ELEC 2071	Motors and Controls II.....................................3
☐ ELEC 2080	National Electrical Code IV................................2

General Education/MnTC Requirements: 12 Credits

Twelve (12) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:

☐ ENGL 1107   Composition I 4
☐ MATH 1400 Algebra and Trigonometry..................................5
☐ SPCH 1200   Interpersonal Communication 3

Also see: Architectural Technology AAS, Architectural Technology diploma, Architectural 2D CAD, and Construction Estimating certificate

Start Dates

Fall Semester...August
Spring Semester ....January**

**Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.

Faculty Contact

Brian Schelkoph... 763-576-4228
Tim Simpson 763-576-4142

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester	Spring Semester	Summer Semester (4 weeks)
1st YEAR	ELEC 1001.....5 ELEC 1020.....4 ELEC 1030.....2 ELEC 1140.....1 MATH 1400 ...5 TOTAL.........17	ELEC 1061.....5 ELEC 1080.....4 ELEC 1090.....3 ELEC 1141.....2 TOTAL.........14	ELEC 1101.....2 ELEC 1110.....2 ELEC 1121.....2 ELEC 1130.....2 TOTAL..............8
	Fall Semester	**Spring Semester**	
2nd YEAR	ELEC 2010.....3 ELEC 2020.....2 ELEC 2030.....3 ELEC 2040.....4 ENGL 1107 ....4 TOTAL.........16	ELEC 1107.....4 ELEC 2060 ....3 ELEC 2071.....2 ELEC 2080.....3 SPCH 1200.....4 TOTAL.........17	

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Biomedical Equipment Technician (BMET)
Associate in Applied Science (AAS) Degree

Technical Requirements 57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical College Biomedical Equipment Technician (BMET) program is a 72-credit Associate of Applied Science (AAS) degree that includes technical and general education components. This degree provides the skills for working in hospitals, manufacturing, and field service plus the possibility to pursue a Bachelor of Arts (BA) degree with cooperating colleges and universities. Full time students can obtain an applied associate science degree in two years. Financial assistance is available for those who qualify and there are several BMET program-specific scholarships available.

Designed by biomedical and manufacturing industry leaders, the program provides a comprehensive, hands-on, career-oriented curriculum. Students will obtain a solid education in biomedical devices/industry fundamentals, electronic engineering fundamentals, computer/networking fundamentals.

Biomedical technicians play a vital role in health care, enhancing the user experience by ensuring all medical equipment is safe and in proper working condition. Technicians inspect, calibrate, maintain, and repair diagnostic equipment, monitoring equipment, therapeutic and life-saving medical equipment (defibrillators, ventilators, drug delivery pumps, CT and MRI Scanners, and more) found in hospitals, medical clinics, imaging centers and medical device companies.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Interpersonal and employability skills: Communicate with peers and customers using professional, ethical and appropriate verbal and nonverbal communication skills; by accepting constructive feedback and displaying appropriate behavior; participating as a member of a team, exhibiting leadership and lifelong learning skills.
2. Electronic Theory: Demonstrate a solid understanding of electronics; by interpreting electronic schematics and diagrams; research, organize and interpret information from various technical sources; identifying components; electronic test equipment used by technician in industry.
3. Biomedical Systems: Convey the understanding of complex relationships between sections of specialized equipment through written, verbal, and/or demonstrative methods.
4. Troubleshooting: Demonstrate principles of troubleshooting and logical diagnosis by using critical thinking skills to define, analyze, and implement a solution.
5. Biomedical Applications: Evaluate and determine that all biomedical equipment is in proper working condition, ensuring a safe, reliable health care environment.
6. Safety Compliance: Participate in class in a professional manner, by acting in compliance with documented safety procedures and appropriate industry standards.
7. Test Equipment: Demonstrate solid understanding of test equipment used by technicians in the health care industry.

Admission Requirements

Accuplacer Reading 78 or READ 0900 with a C or better and Accuplacer Math 71 or MATH 0801 with a B or better.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
*   Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

*   Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

In today's health care market, technology is paramount. The need for a workforce knowledgeable in the theory of operation, underlying physiological principles, and safe application of biomedical equipment is a central concern of many hospitals and companies.

The BMET is a skilled technician that demonstrates the knowledge to ensure a safe, reliable health care environment. Referenced from International Certification Commission (ICC) handbook http://www.aami.org/certification/

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 57 Credits

☐ BMED 2100* Design & Manufacturing in Medical Device Industry 3
☐ BMED 2200 *Introduction to Medical Device Regulations/Ethics 3
☐ BMED 2300* Introduction to Quality Assurance 3
☐ BMET 1200 Biomedical Equipment and Terminology 2
☐ BMET 1301 Biomedical Networking 2
☐ BMET 2012 Biomedical Instrumentation 4
☐ ETEC 1102 Mechatronics 1 DC 3
☐ ETEC 1113 Mechatronics 2 AC 3
☐ ETEC 1130 Intro to Electronic Engineering Technology 2
☐ ETEC 1140 Circuit Analysis 1 2
☐ ETEC 1151 Computer Troubleshooting A+ 3
☐ ETEC 1170 Programmable Logic Controllers (PLCs) 2

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Biomedical Equipment Technician (BMET)

Associate of Applied Science (AAS) Degree

☐ ETEC 1202	Solid State Electronic	5
☐ ETEC 1250	Digital 1	3
☐ ETEC 1260	Lasers and Optics	2
☐ ETEC 1271	Technical Documentation	3
☐ ETEC 1281	Engineering Technology Programming: LabVIEW and C++	2
☐ ETEC 2011	Machine-to-Machine Wireless Communications	2
☐ ETEC 2138	LabVIEW and Data Acquisition	4
☐ ETEC 2276	Industrial Networking IOT/M2M	4

* Evening courses taken at Anoka-Ramsey Community College

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:

☐ BIOL 1104*	The Human Body-Structure & Function	4

OR

☐ BIOL 1130	Human Biology	4
☐ MATH 1550	Introduction to Statistics	4
☐ SPCH 1200	Interpersonal Communication	3
☐	General Education/MnTC Courses	4

* Course is taken at Anoka-Ramsey Community College

Also see: Electronic Engineering Technology AAS and Electronic Technology diploma

Start Dates

Fall Semester .... August
*Spring Semester .... January

Faculty Contact

Tom Reid 763-576-4139
Daniel Truchon 763-576-4185

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester	Spring Semester	Summer Semester
1st YEAR	ETEC 1102 3	BMET 1301 2	MATH 1550* 4
	ETEC 1130 2	ETEC 1113 3	SPCH 1200* 3
	ETEC 1140 2	ETEC 1170 2	TOTAL 7
	ETEC 1151 3	ETEC 1202 5	
	ETEC 1250 3	ETEC 1260 2	
	ETEC 1271 3	ETEC 1281 2	
	TOTAL 16	TOTAL 16	

	Fall Semester	Spring Semester	
2nd YEAR	BMED 2100 3	BMED 2200 3	
	BMED 2300 3	BMET 2012 4	
	BMET 1200 2	BIOL 1104 OR	
	ETEC 2138 4	BIOL 1130 4	
	ETEC 2276 4	ETEC 2011 2	
	TOTAL 16	Gen Ed/MnTC* ... 4	
		TOTAL 17	

*Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Electronic Engineering Technology
Associate of Applied Science (AAS) Degree

Technical Requirements 57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical College Electronic Engineering Technology (EET) program offers a 72-credit Electronic Engineering Technology Associate of Applied Science (AAS) degree that prepares students to work with mechatronics, robotics, automation and controls, computer servicing/networking, and biomedical equipment.

Students gain a thorough understanding of how computers and machines communicate as well as system level troubleshooting, plus a solid education in electronic engineering technology fundamentals.

Students will also learn about:
- Mechatronics
- Lasers and Optics
- Robotics
- Computer Troubleshooting A+
- Networking
- Programmable Logic Controllers (PLCs)
- LabVIEW programming applications
- Motor Control
- Microcontrollers
- Advanced Troubleshooting
- Project Management
- Interpersonal Skills, such as customer service and teamwork

Designed by electronic engineering industry leaders, the program provides a comprehensive, hands-on, career-oriented curriculum. Students will obtain a solid education in electronic engineering fundamentals, mechatronics, robotics, automation and controls, computer servicing/networking and Biomedical Equipment Technician (BMET). Full time students can obtain an Electronic Technician diploma in two semesters, and an associate applied science degree in four semesters. Financial assistance is available for those who qualify and there are several EET program-specific scholarships available.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Interpersonal and employability skills: Communicate with peers and customers using professional, ethical and appropriate verbal and nonverbal communication skills; by accepting constructive feedback and displaying appropriate behavior; participating as a member of a team, exhibiting leadership and lifelong learning skills.
2. Electronic Theory: Demonstrate a solid understanding of electronics; by interpreting electronic schematics and diagrams; research, organize and interpret information from various technical sources; identifying components; electronic test equipment used by technician in industry.
3. Mechatronic Systems: Convey the understanding of complex relationships between sections of specialized equipment through written, verbal, and/or demonstrative methods.
4. Troubleshooting: Demonstrate principles of troubleshooting and logical diagnosis by using critical thinking skills to define, analyze, and implement a solution.
5. Mechatronic Applications: Evaluate and determine that all mechatronic equipment is in proper working condition, ensuring a safe, reliable manufacturing environment.
6. Safety Compliance: Participate in class in a professional manner, by acting in compliance with documented safety procedures and appropriate industry standards.

Admission Requirements

Accuplacer Reading 78 or READ 0900 with a C or better and Accuplacer Math 71 or MATH 0801 with a B or better.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

For students who want to continue their education and obtain their four-year degree, the Electronic Engineering Technology (EET) program has articulation agreements with Minnesota State University (Mankato), Minnesota State University (Moorhead), Bemidji State University, and University of Minnesota Crookston. Students can complete most of these four-year degrees through online courses.

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

As part of the Electronic Engineering Technology (EET) program, Electronic Engineering Technology (EET) Associate of Applied Science (AAS) degree provides students with the technical knowledge and practical experience necessary for an exciting career in electronics, mechatronics, robotics, automation and controls, computer servicing/networking, Biomedical Equipment Technician (BMET) and engineering support.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/jobseekers/job-outlook/index.jsp).

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Electronic Engineering Technology
Associate of Applied Science (AAS) Degree

Technical Education: 57 Credits

☐ BMET 1301 Biomedical Networking.......................................2
☐ ETEC 1102 Mechatronics 1 DC 3
☐ ETEC 1113 Mechatronics 2 AC 3
☐ ETEC 1130 Introduction to Electronic Engineering
Technology...2
☐ ETEC 1140 Circuit Analysis 2
☐ ETEC 1151 Computer Troubleshooting A+ 3
☐ ETEC 1170 Programmable Logic Controllers (PLCs)............2
☐ ETEC 1202 Solid State Electronics 5
☐ ETEC 1250 Digital 1 3
☐ ETEC 1260 Lasers and Optics 2
☐ ETEC 1271 Technical Documentation 3
☐ ETEC 1281 Engineering Technology Programming:
LabVIEW and C++.....................................2
ETEC 2011 Machine-to-Machine Wireless
Communications.....................................2
☐ ETEC 2138 LabVIEW and Data Acquisition 4
☐ ETEC 2143 Advanced Programmable Logic
Controllers (PLCs)................................3
☐ ETEC 2162 Robotics and Automation Controls.....................5
☐ ETEC 2172 Mechatronics Capstone Project 5
☐ ETEC 2177 Mechatronics Capstone Design
and Documentation...............................2
☐ ETEC 2276 Industrial Networking IOT/M2M 4

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:
☐ MATH 1550 Introduction to Statistics 4
☐ General Education/MnTC Courses...11
Also see: Biomedical Equipment Technician AAS and Electronic Technology diploma

Start Dates

Fall Semester..August
*Spring Semester ....January

Faculty Contact

Tom Reid... 763-576-4139
Daniel Truchon... 763-576-4185

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester	Spring Semester	Summer Semester
1st YEAR	ETEC 1130...........2 ETEC 1102...........3 ETEC 1140...........2 ETEC 1151...........3 ETEC 1271...........3 ETEC 1250...........3 TOTAL..............16	ETEC 1113...........3 ETEC 1202...........5 ETEC 1170...........2 BMET 1301..........2 ETEC 1260...........2 ETEC 1281...........2 TOTAL..............16	MATH 1550 ....4 Gen Ed/MnTC......3 TOTAL.................7
	Fall Semester	**Spring Semester**	
2nd YEAR	ETEC 2138...........4 ETEC 2162...........5 ETEC 2143...........3 ETEC 2276...........4 TOTAL 16	ETEC 2011...........2 ETEC 2172...........5 ETEC 2177...........2 Gen Ed/MnTC .....8 TOTAL 17	

Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Special Electronics Technician

Emphasis
Associate of Applied Science (AAS) Degree

Technical Requirements.............57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical Electronic Engineering Technology (EET) program includes a 72-credit Special Electronics Technician Associate of Applied Science (AAS) degree emphasis program that prepares students in core electronic engineering technology skills, as well as a broad background in computer support and networking.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.

1. Interpersonal and employability skills: Communicate with peers and customers using professional, ethical and appropriate verbal and nonverbal communication skills; by accepting constructive feedback and displaying appropriate behavior; participating as a member of a team, exhibiting leadership and lifelong learning skills.
2. Electronic Theory: Demonstrate a solid understanding of electronics; by interpreting electronic schematics and diagrams; research, organize and interpret information from various technical sources; identifying components; electronic test equipment used by technician in industry.
3. Mechatronic Systems: Convey the understanding of complex relationships between sections of specialized equipment through written, verbal, and/or demonstrative methods.
4. Troubleshooting: Demonstrate principles of troubleshooting and logical diagnosis by using critical thinking skills to define, analyze, and implement a solution.
5. Mechatronic Applications: Evaluate and determine that all mechatronic equipment is in proper working condition, ensuring a safe, reliable manufacturing environment.
6. Safety Compliance: Participate in class in a professional manner, by acting in compliance with documented safety procedures and appropriate industry standards.

Admission Requirements

1. This program requires instructor approval.
2. Accuplacer Reading 78 or READ 0900 with a C or better and Accuplacer Math 71 or MATH 0801 with a B or better.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_ agreements.php?numResults=25&archive=false&from_ inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student (www.anokatech.edu/ BecomeStudent/Transfers.aspx)

Industry Information

As part of the Electronic Engineering Technology (EET) program, the Special Electronics Technician (EET) emphasis Associate of Applied Science (AAS) degree provides students with the technical knowledge and practical experience necessary for an exciting career in electronics, mechatronics, robotics, automation and controls, computer servicing/networking, biomedical equipment technician (BMET) and engineering support.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 57 Credits

☐ **Special Electronics Technician Core Credits 37**
☐ BMET 1301   Biomedical Networking.......................................2
☐ ETEC 1102   Mechatronics 1 DC 3
☐ ETEC 1113   Mechatronics 2 AC 3
☐ ETEC 1130   Introduction to Electronic Technology 2
☐ ETEC 1140   Circuit Analysis 2
☐ ETEC 1151   Computer Troubleshooting A+ 3
☐ ETEC 1170   Programmable Logic Controllers (PLCs)............2
☐ ETEC 1202   Solid State Electronics...5
☐ ETEC 1250   Digital 1 3
☐ ETEC 1260   Lasers and Optics 2
☐ ETEC 1271   Technical Documentation 3
☐ ETEC 1281   Engineering Technology Programming:
                            LabVIEW and C++...2
☐ ETEC 2011   Machine-to-Machine Wireless
                            Communications..2
☐ ETEC 2143   Advanced Programmable Logic
                            Controllers (PLCs)...3
☐ **Special Electronics Technician 20**

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:
☐ MATH 1550 Introduction to Statistics 4
☐ General Education/MnTC Courses...11
Also see: Biomedical Equipment Technician AAS, Electronic Engineering Technology AAS and Electronic Technology diploma

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Special Electronics Technician
Emphasis
Associate of Applied Science (AAS) Degree

Start Dates

Fall Semester..August
*Spring Semester ....January

Faculty Contact

Tom Reid.. 763-576-4139
Daniel Truchon.. 763-576-4185

For information on how to apply or schedule a tour, contact Enrollment Services at 763-576-7710 or EnrollmentServices@ anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester	Spring Semester	Summer Semester
1st YEAR	ETEC 1102............3	BMET 1301..........2	MATH 1550 4
	ETEC 1130............2	ETEC 1113...........3	Gen Ed/MnTC......3
	ETEC 1140............2	ETEC 1170...........2	TOTAL.................7
	ETEC 1151............3	ETEC 1202...........5	
	ETEC 1271............3	ETEC 1260...........2	
	ETEC 1250............3	ETEC 1281...........2	
	TOTAL...............16	TOTAL...............16	
	Fall Semester	**Spring Semester**	
2nd YEAR	ETEC 2143............3	ETEC 2011...........2	
	*see advisor	*see advisor	

Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Electronic Technology
Diploma

Total Technical Credits...............32

Program Information

The Anoka Technical Electronic Engineering Technology (EET) program includes a 32-credit Electronic Technology diploma that provides students with the technical knowledge necessary to start a career in electronics.

Full-time students may complete an Electronic Technology diploma in two semesters. Full-time students who continue in the program can obtain an AAS degree in Electronic Engineering Technology (EET) with an additional two semesters.

Students will obtain a solid education in electronic fundamentals, as well as system-level troubleshooting.

Students also learn about:
• Computer Troubleshooting A+
• LabVIEW programming applications
• Lasers and Optics
• Mechatronics
• Networking
• Programmable Logic Controllers (PLCs)
• Robotics

Financial assistance is available for those who qualify and there are several EET program-specific scholarships available.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Interpersonal and employability skills: Communicate with peers and customers using professional, ethical and appropriate verbal and nonverbal communication skills; by accepting constructive feedback and displaying appropriate behavior; participating as a member of a team, exhibiting leadership and lifelong learning skills.
2. Electronic Theory: Demonstrate a solid understanding of electronics; by interpreting electronic schematics and diagrams; research, organize and interpret information from various technical sources; identifying components; electronic test equipment used by technician in industry.
3. Mechatronic Systems: Convey the understanding of complex relationships between sections of specialized equipment through written, verbal, and/or demonstrative methods.
4. Troubleshooting: Demonstrate principles of troubleshooting and logical diagnosis by using critical thinking skills to define, analyze, and implement a solution.
5. Mechatronic Applications: Evaluate and determine that all mechatronic equipment is in proper working condition, ensuring a safe, reliable manufacturing environment.
6. Safety Compliance: Participate in class in a professional manner, by acting in compliance with documented safety procedures and appropriate industry standards.

Admission Requirements

Accuplacer Reading 78 or READ 0900 with a C or better and Accuplacer Math 71 or MATH 0801 with a B or better.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

As part of the Electronic Engineering Technology program, the Electronic Technology diploma provides students with the technical knowledge necessary to start their career in electronics and manufacturing support.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 32 Credits

☐ BMET 1301	Biomedical Networking	2
☐ ETEC 1102	Mechatronics 1 DC	3
☐ ETEC 1113	Mechatronics 2 AC	3
☐ ETEC 1130	Introduction to Electronic Engineering Technology	2
☐ ETEC 1140	Circuit Analysis	2
☐ ETEC 1151	Computer Troubleshooting A+	3
☐ ETEC 1170	Programmable Logic Controllers (PLCs)	2
☐ ETEC 1202	Solid State Electronics	5
☐ ETEC 1250	Digital 1	3
☐ ETEC 1260	Lasers and Optics	2
☐ ETEC 1271	Technical Documentation	3
☐ ETEC 1281	Engineering Technology Programming: LabVIEW and C++	2

Also see: Biomedical Equipment Technician AAS and Electronic Engineering Technology AAS

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Electronic Technology
Diploma

Start Dates

Fall Semester...August
*Spring Semester ....January

Faculty Contact

Tom Reid.. 763-576-4139
Daniel Truchon.. 763-576-4185

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

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Sample Program Sequence
Full Time

	Fall Semester	Spring Semester
1ˢᵗ YEAR	ETEC 1102...........3	BMET 1301..........2
	ETEC 1130...........2	ETEC 1113...........3
	ETEC 1140...........2	ETEC 1170..........2
	ETEC 1151...........3	ETEC 1202...........5
	ETEC 1250...........3	ETEC 1260..........2
	ETEC 1271...........3	ETEC 1281..........2
	TOTAL...............16	TOTAL...............16

Students who start in the S=spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

CNC Design & Manufacturing Technology
Associate of Applied Science (AAS) Degree

Program Information

The CNC Design & Manufacturing Technology associate of Applied Science (AAS) is a 69-credit degree program includes technical and general education components to provide the skills for trade entry plus the possibility to pursue a Bachelor of Arts (BA) degree with cooperating colleges and universities.

The CNC Manufacturing Technology degree program prepares people to write and edit CNC programs, perform complex setups, basic troubleshooting of machine problems, cycle time reduction practices, fixture design and building, recognize areas for process improvements and operate the following equipment: manual lathes, grills mills, grinders, CNC programming, CNC mills, CNC lathes, coordinate measuring machine, CAD/CAM and 4&5 axis CNC mills.

Graduates are also skilled in the areas of basic troubleshooting of machine problems, cycle time reduction practices, fixture design and building, blueprint reading, GD&T, statistical process control, lean manufacturing, math, inspection and the correct sequence of operation required. Graduates may also be skilled in the areas of tool and cutter, CNC wire EDM and CNC sinker EDM, and CNC parametric programming depending on elective taken.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. The student will demonstrate machine skills and practices consistent with the manufacturing industry.
2. Exhibit safety principles and practices in a manufacturing environment.
3. Communicate effective use of machine shop theory and process terminology.
4. Work efficiently as a member in a machine shop environment to manage time and meet project deadlines.
5. Work effectively as a member of a team while accepting constructive criticism.

Course Prerequisites

Although no prior knowledge or experience is necessary to succeed in this program, a background in shop math and algebra, mechanical drafting machine shop and mechanical skills can be helpful.

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The machinist is a skilled metal worker who produces metal parts by using machine tools and hand tools. Training and experience enable the machinist to plan and carry through all the operations needed to turn out a finished machine product and to switch readily from one kind of product to another. The machinist's background and knowledge enables him/her to turn a block of metal into an intricate, precise part.

All options are an art as well as a skill, and are considered to be demanding occupations. There is a great variety in the construction of dies and molds, depending on the design of a part, the type of materials used, the ingenuity of the designer, and the knowledge and skill of the die and mold maker, who must machine intricate components of various tooling to tolerances expressed in fractions of one-thousandths of an inch.

Employees in this position are expected to write and edit CNC programs, perform complex setups, basic troubleshooting of machine problems, cycle time reduction practices, fixture design and building and recognize areas for process improvements on manual lathes, drills, mills, grinders, CNC mills, CNC lathes, CNC wire EDM and CNC sinker EDM, coordinate measuring machine, and CAD/CAM. Employees are also expected to invoke lean manufacturing process and practices.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 54 Credits

☐ MACH 1101 Milling 4
☐ MACH 1106 Lathe 3
☐ MACH 1121 Metrology 2
☐ MACH 1132 Blueprint Reading I 3
☐ MACH 1140 CAD I 1
☐ MACH 1200 Advanced Machining 3
☐ MACH 1220 Grinding.. 2
☐ MACH 1231 Blueprint Design/ CAD II 1
☐ MACH 1240 Geometric Dimensioning & Tolerancing 3
☐ MACH 1251 CNC Machining... 3
☐ MACH 1261 CNC Programming I... 3
☐ MACH 1275 Quality Standards 1

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
CNC Design & Manufacturing Technology
Associate of Applied Science (AAS) Degree

☐ MACH 2310 CNC Milling.. 3
☐ MACH 2320 CNC Turning 3
☐ MACH 2331 CAM 1
☐ MACH 2340 CNC Programming II 2
☐ MACH 2351 Mold/Die Making Theory.............................. 3
☐ MACH 2360 Fixture and Tooling 4
☐ MACH 2451 CNC Design and Manufacture 3
☐ MACH 2462 Multi-Axis Milling 3
☐ MACH 2472 Multi-AxisTurning.. 3

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:
☐ MATH 1650 College Trigonometry 3
☐ ENGL 1107 Composition I 4
☐ General Education/MnTC Courses.. 8

Also see: Advanced CNC Machine Technology diploma and Machine Technology Certificates 1, 2, and 3

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Jesse Oldenburg 763-576-4065
Brendon Paulson 763-576-4243
Matt Rogers... 763-576-4088
Jerry Showalter 763-576-4043

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR

First Semester		Second Semester	
MACH 1101	4	MACH 1200	3
MACH 1106	3	MACH 1220	2
MACH 1121	2	MACH 1231	1
MACH 1132	3	MACH 1240	3
MACH 1140	1	MACH 1251	3
MATH 1650	3	MACH 1261	3
		MACH 1275	1
		Gen Ed/MnTC	2
TOTAL 16		**TOTAL 18**	

2nd YEAR

Third Semester		Fourth Semester	
MACH 2310	3	ENGL 1107	4
MACH 2320	3	MACH 2451	3
MACH 2331	1	MACH 2462	3
MACH 2340	2	MACH 2472	3
MACH 2351	3	Gen Ed/MnTC	6
MACH 2360	4	**TOTAL 19**	
TOTAL 16			

ANOKA
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Program Information

The Anoka Technical College Advanced CNC Machine Technology diploma is a 64-credit program that includes technical and general education components. The career major prepares students to write and edit CNC programs, perform complex setups, basic troubleshooting of machine problems, cycle time reduction practices, fixture design and building, recognize areas for process improvements and operate the following equipment: manual lathes, drills, mills, grinders, CNC mills, CNC lathes, CNC wire EDM and CNC sinker EDM, coordinate measuring machine, CAD/CAM and 4&5 axis CNC mills.

Program graduates are skilled in the areas of CNC programming, parametric programming, basic troubleshooting of machine problems, cycle time reduction practices, fixture design and building, blueprint reading, GD&T, statistical process control, lean manufacturing, math, inspection and the correct sequence of operation required.

Those employed in this position are expected to write and edit CNC programs, perform complex setups, basic troubleshoot of machine problems, cycle time reduction practices, fixture design and building and recognize areas for process improvements on manual lathes, drills, mills, grinders, CNC mills, CNC lathes, CNC wire EDM and CNC sinker EDM, coordinate measuring machine and CAD/CAM. Employees are also expected to invoke lean manufacturing process and practices.

The CNC Manufacturing Technology program provides the skills for trade entry plus the possibility to pursue a Bachelor of Arts (BA) degree with cooperating colleges and universities.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Write and edit CNC programs
2. Perform complex setups
3. Basic troubleshooting of machine problems
4. Cycle time reduction practices
5. Fixture design and building
6. Recognize areas for process improvements

Course Prerequisites

Although no prior knowledge or experience is necessary to succeed in this program, a background in shop math and algebra, mechanical drafting, machine shop and mechanical skills can be helpful.

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The machinist is a skilled metal worker who produces metal parts by using machine tools and hand tools. Training and experience enable the machinist to plan and carry through all the operations needed to turn out a finished machine product and to switch readily from one kind of product to another. The machinist's background and knowledge enables him/her to turn a block of metal into an intricate, precise part.

All options are an art as well as a skill, and are considered to be demanding occupations. There is a great variety in the construction of dies and molds, depending on the design of a part, the type of materials used, the ingenuity of the designer, and the knowledge and skill of the die and mold maker, who must machine intricate components of various tooling to tolerances expressed in fractions of one-thousandths of an inch.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 64 Credits

☐	MACH 1101 Milling	4
☐	MACH 1106 Lathe	3
☐	MACH 1121 Metrology.	2
☐	MACH 1132 Blueprint Reading I	3
☐	MACH 1140 CAD I	1
☐	MACH 1171 Math for Machinist I	3
☐	MACH 1200 Advanced Machining	3
☐	MACH 1220 Grinding	2
☐	MACH 1231 Blueprint Design/ CAD II	1
☐	MACH 1240 Geometric Dimensioning & Tolerancing	3
☐	MACH 1251 CNC Machining	3
☐	MACH 1261 CNC Programming I	3
☐	MACH 1275 Quality Standard	1
☐	MACH 2310 CNC Milling	3
☐	MACH 2320 CNC Turning	3
☐	MACH 2331 CAM	1

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Advanced CNC Machine Technology
2018-2019

Diploma

☐ MACH 2340 CNC Programming II 2
☐ MACH 2351 Mold/Die making Theory 3
☐ MACH 2360 Fixture and Tooling 4
☐ MACH 2411 Tool and Cutter Grinding 2
☐ MACH 2420 EDM Machining..............................2
☐ MACH 2435 Swiss Machining. 2
☐ MACH 2440 CNC Programming III 1
☐ MACH 2451 CNC Design and Manufacture. 3
☐ MACH 2462 Multi-Axis Milling 3
☐ MACH 2472 Multi-Axis Turning.........................3

Also see: CNC Design & Manufacturing Technology AAS and Machine Technology Certificate 1, 2, and 3

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Jesse Oldenburg 763-576-4065
Matt Rogers.. 763-576-4088
Brendon Paulson 763-576-4243
Jerry Showalter 763-576-4043

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	First Semester		Second Semester	
	MACH 1101	4	MACH 1200	3
	MACH 1106	3	MACH 1220	2
	MACH 1121	2	MACH 1231	1
	MACH 1132	3	MACH 1240	3
	MACH 1140	1	MACH 1251	3
	MACH 1171	3	MACH 1261	3
			MACH 1275	1
	TOTAL	**16**	**TOTAL**	**16**

2nd YEAR	Third Semester		Forth Semester	
	MACH 2310	3	MACH 2410	2
	MACH 2320	3	MACH 2420	2
	MACH 2331	1	MACH 2435	2
	MACH 2340	2	MACH 2440	1
	MACH 2351	3	MACH 2451	3
	MACH 2360	4	MACH 2462	3
			MACH 2472	3
	TOTAL	**16**	**TOTAL**	**16**

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Machine Technology Certificate 1
Certificate

Total Technical Credits...............16

Program Information

The Anoka Technical College Machine Technology Certificate 1 is a 16-credit program that prepares students for entry level skills to set up and operate the following equipment: manual lathes, drill, mills and grinders. Program graduates are skilled in the areas of blueprint reading, math and inspection.

Machinists working in this field are expected to set up and operate manual lathes, drills, mills and grinders. They are able to inspect and produce parts to the desired dimensions under proper supervision.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. The student will demonstrate machine skills and practices consistent with the manufacturing industry.
2. Exhibit safety principles and practices in a manufacturing environment.
3. Communicate effective use of machine shop theory and process terminology.
4. Work efficiently as a member in a machine shop environment to manage time and meet project deadlines.
5. Work effectively as a member of a team while accepting constructive criticism.

Course Prerequisites

Although no prior knowledge or experience is necessary to succeed in this program, a background in shop math and algebra, mechanical drafting, machine shop and mechanical skills can be helpful.

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The machinist is a skilled metal worker who produces metal parts by using machine tools and hand tools. Training and experience enable the machinist to plan and carry through all the operations needed to turn out a finished machine product and to switch readily from one kind of product to another. The machinist's background and knowledge enables him/her to turn a block of metal into an intricate, precise part.

All options are an art as well as a skill, and are considered to be demanding occupations. There is a great variety in the construction of dies and molds, depending on the design of a part, the type of materials used, the ingenuity of the designer, and the knowledge and skill of the die and mold maker, who must machine intricate components of various tooling to tolerances expressed in fractions of one-thousandths of an inch.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 16 Credits

☐ MACH 1101 Milling 4
☐ MACH 1106 Lathe 3
☐ MACH 1121 Metrology 2
☐ MACH 1132 Blueprint Reading I...3
☐ MACH 1140 CAD I..1
☐ MACH 1171 Math for Machinist I 3
OR
☐ MATH 1650 College Trigonometry 3
Also see: CNC Design & Manufacturing Technology AAS, Advanced CNC Machine Technology diploma and Machine Technology Certificate 2, and 3

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Brendon Paulson 763-576-4243
Jesse Oldenburg 763-576-4065
Matt Rogers... 763-576-4088
Jerry Showalter 763-576-4043

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Sample Program Sequence
Full Time

	First Semester	
1st YEAR	MACH 1101........................4	
	MACH 1106........................3	
	MACH 1121........................2	
	MACH 1132........................3	
	MACH 1140........................ 1	
	MACH 1171........................3	
	OR MATH 1650..................3	
	TOTAL 16	

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Machine Technology Certificate 2
Certificate

Total Technical Credits...............16

Program Information

The Anoka Technical College Machine Technology Certificate 2 is a 16-credit program that prepares students with mid-level skills to set up and operate the following equipment: manual mills, lathes and surface grinding. Inputting of programs, offsets and the use of cutter compensation on CNC mills and lathes are also covered.

Program graduates are skilled in the areas of solid modeling and blueprint generation, GD&T, statistical process control, math and advanced inspection practices.

Graduates working in this field are expected to perform basic setup and operation of manual and CNC lathes, mills and grinders. They are able to inspect and produce parts to the desired dimensions, with proper supervision.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. The student will demonstrate machine skills and practices consistent with the manufacturing industry.
2. Exhibit safety principles and practices in a manufacturing environment.
3. Communicate effective use of machine shop theory and process terminology.
4. Work efficiently as a member in a machine shop environment to manage time and meet project deadlines.
5. Work effectively as a member of a team while accepting constructive criticism.

Admission Requirements

Must successfully complete Machine Technology certificate 1.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The machinist is a skilled metal worker who produces metal parts by using machine tools and hand tools. Training and experience enable the machinist to plan and carry through all the operations needed to turn out a finished machine product and to switch readily from one kind of product to another. The machinist's background and knowledge enables him/her to turn a block of metal into an intricate, precise part.

All options are an art as well as a skill, and are considered to be demanding occupations. There is a great variety in the construction of dies and molds, depending on the design of a part, the type of materials used, the ingenuity of the designer, and the knowledge and skill of the die and mold maker, who must machine intricate components of various tooling to tolerances expressed in fractions of one-thousandths of an inch.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 16 Credits

☐ MACH 1200 Advanced Machining...3
☐ MACH 1220 Grinding..2
☐ MACH 1231 Blueprint Design/CAD II....................................1
☐ MACH 1240 Geometric Dimensioning & Tolerancing 3
☐ MACH 1250 CNC Machining..2
☐ MACH 1261 CNC Programming I...3
☐ MACH 1275 Quality Standard 1

Also see: CNC Design & Manufacturing Technology AAS, Advanced CNC Machine Technology diploma and Machine Technology certificate 1 and 3

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Matt Rogers... 763-576-4088
Jesse Oldenburg 763-576-4065
Brendon Paulson 763-576-4243
Jerry Showalter 763-576-4043

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Sample Program Sequence
Full Time

1ˢᵗ YEAR	First Semester			
	MACH 1200.........................3		MACH 1261.........................3	
	MACH 1220.........................2		MACH 1275.........................1	
	MACH 1231........................1			
	MACH 1240.........................3		**TOTAL 16**	
	MACH 1251........................3			

ANOKA TECHNICAL COLLEGE
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Program Information

The Anoka Technical College Machine Technology Certificate 3 is a 16-credit program that prepare students for entry-level positions to operate and perform offset changes, as well as basic setups on the following equipment: CNC mills, CNC lathes, coordinate measuring machine and CAD/CAM.

Program graduates are skilled in the areas of blueprint reading, GD&T, statistical process control, lean manufacturing, math, inspection and the correct sequence of operation.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. The student will demonstrate machine skills and practices consistent with the manufacturing industry.
2. Exhibit safety principles and practices in a manufacturing environment.
3. Communicate effective use of machine shop theory and process terminology.
4. Work efficiently as a member in a machine shop environment to manage time and meet project deadlines.
5. Work effectively as a member of a team while accepting constructive criticism.

Admission Requirements

Must successfully complete Machine Technology certificate 2.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The machinist is a skilled metal worker who produces metal parts by using machine tools and hand tools. Training and experience enable the machinist to plan and carry through all the operations needed to turn out a finished machine product and to switch readily from one kind of product to another. The machinist's background and knowledge enables him/her to turn a block of metal into an intricate, precise part.

All options are an art as well as a skill, and are considered to be demanding occupations. There is a great variety in the construction of dies and molds, depending on the design of a part, the type of materials used, the ingenuity of the designer, and the knowledge and skill of the die and mold maker, who must machine intricate components of various tooling to tolerances expressed in fractions of one-thousandths of an inch.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Wages/Outlook/Advancement

Follow this link for a Gainful Employment Report.

Technical Education: 16 Credits

☐ MACH 2310 CNC Milling 3
☐ MACH 2320 CNC Turning 3
☐ MACH 2331 CAM 1
☐ MACH 2340 CNC Programing II...2
☐ MACH 2351 Mold/Die Making Theory...................................3
☐ MACH 2360 Fixture and Tooling...4
Also see: CNC Design & Manufacturing Technology AAS, Advanced CNC Machine Technology diploma and Machine Technology certificate 1 and 2

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Jesse Oldenburg 763-576-4065
Brendon Paulson 763-576-4243
Matt Rogers.. 763-576-4088
Jerry Showalter 763-576-4043

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Sample Program Sequence
Full Time

	First Semester	
1st YEAR	MACH 2310........................3	
	MACH 2320........................3	
	MACH 2331........................1	
	MACH 2340........................2	
	MACH 2351........................3	
	MACH 2360........................4	
	TOTAL 16	

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Multi-Axis Machining
Advanced Certificate

Total Technical Credits...............9

Program Information

The Anoka Technical College Multi-Axis Machining advanced certificate is a nine (9)-credit program advanced certification that prepares students in the understanding of multi-axis programming and the art of machining.

Multi-Axis Machining program graduates are skilled in the areas of multi-axis principles of programming and machining, and cycle time reduction.

Graduates also gain a deeper insight into the knowledge needed to create complex three-dimensional (3-D) shapes and five-sided machining. This increases the machining operations to be performed in one setup, reducing handling and machines necessary to complete the job. With more companies utilizing lean manufacturing, the use of multi-axis machining technology continues to grow.

Admission Requirements

This advanced certificate requires an evaluation examination through the Machine Trades Department.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Industry Information

The machinist is a skilled metal worker who produces metal parts by using machine tools and hand tools. Training and experience enable the machinist to plan and carry through all the operations needed to turn out a finished machine product and to switch readily from one kind of product to another. The machinist's background and knowledge enables him/her to turn a block of metal into an intricate, precise part.

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Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 9 Credits

☐ MACH 2510 Multi Axis CNC Programming...........................4
☐ MACH 2520 Multi Axis CNC Machining 5

Also see: CNC Design & Manufacturing Technology AAS, Advanced CNC Machine Technology diploma, Machine Technology certificates 1, 2, and 3

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Jesse Oldenburg 763-576-4065
Matt Rogers.. 763-576-4088

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ANOKA
TECHNICAL COLLEGE
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2018-2019
Mechanical Drafting & Design
Associate of Applied Science (AAS) Degree

Technical Requirements 54
General Education/MnTC 15
Total Credits 69

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Mechanical Drafting & Design Technology is a 69-credit program that consists of technical courses designed to develop skills in mechanical drafting, design, and related fields.

All manufactured goods are created following a design process and this process needs to be documented. This documentation includes three-dimensional computer models, detailed two-dimensional drawings, bill of materials, engineering and manufacturing changes, physical prototypes, and more. The ability to follow strict industry standards while utilizing creativity to solve and document complex problems is the job of a mechanical designer.

In addition to drafting and detailing skills, students receive training in related areas such as industrial materials, manufacturing methods, machining, and professional communication.

Students also receive hands-on training in Anoka Technical College's computer aided drafting lab. (AutoCAD, Inventor, ProE/Creo, and Solidworks)

The primary goal of the Mechanical Drafting and Design program is to provide all graduates with the solid technical foundation necessary to ensure their success in a wide variety of employment opportunities. To accomplish this goal, program learning outcomes and program objectives are defined and assessed for continuous improvement.

Program Objectives. Graduates two to three years into their careers should have the foundation to:

1. Identify, create and evaluate solutions to complex engineering-related problems in a timely and professional manner utilizing the skills developed in the areas of design, manufacturing and mechanics.

2. Solve technical problems while considering the local, national, and global requirements and impact of the solution.

3. Successfully function as a team member and leader.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities.
2. Apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge.
3. Conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
4. Function effectively as a member of a technical team.
5. Identify, analyze, and solve narrowly defined engineering technology problems.
6. Apply written, oral, and graphical communication in both technical and non-technical environments; and identify and use appropriate technical literature.
7. Understand the need for and an ability to engage in self-directed continuing professional development.
8. Understand and commit to addressing professional and ethical responsibilities, including a respect for diversity.
9. Commit to quality, timeliness, and continuous improvement.
10. Demonstrate knowledge and technical competency appropriate to the objectives of the program in engineering materials, applied mechanics, and manufacturing methods.
11. Demonstrate knowledge and technical competency appropriate to the objectives of the program in applied drafting practice emphasizing mechanical components and systems, as well as fundamentals of descriptive geometry, orthographic projection, sectioning, tolerancing and dimensioning, and basic computer aided drafting and design with technical depth in at least one of these areas.
12. Demonstrate knowledge and technical competency appropriate to the objectives of the program in the application of physics and engineering materials having an emphasis in applied mechanics, or in-depth application of physics having emphasis in mechanical components and design.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_ agreements.php?numResults=25&archive=false&from_ inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student: (www.anokatech.edu/ BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Mechanical Drafting and Design Technology program graduates find employment with manufacturing companies, big and small, engineering firms, electro-mechanical companies and contract firms. Mechanical Drafting and Design Technology graduates have the necessary knowledge and an excellent foundation to begin their careers as mechanical drafters in engineering departments that design and manufacture hard goods products of every description. Most mechanical drafters begin as detail drafters, making the drawings required for the manufacture of products. Mechanical drafters can advance to supervisory positions within the department or may advance to assistant engineer as they gain experience. Other areas of advancement include purchasing and sales.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

2018-2019
Mechanical Drafting and Design
Associate of Applied Science (AAS) Degree

Technical Education: 54 Credits

- ☐ MACH 1090 Machining Fundamentals 2
- ☐ MATH 1070 Technical Mathematics I 3
- ☐ MATH 1080 Technical Mathematics II 2
- ☐ MECH 1200 Mechanical CAD I 4
- ☐ MECH 1216 Drafting Standards 5
- ☐ MECH 1229 Materials and Processes 3
- ☐ MECH 1235 Statics and Strengths of Materials 3
- ☐ MECH 1245 Sheet Metal Concepts and Applications 3
- ☐ MECH 2035 Process Design Drafting 3
- ☐ MECH 2045 Design Projects 4
- ☐ MECH 2055 Geometric Dimensioning and Tolerancing 3
- ☐ MECH 2064 Introduction to Inventor 4
- ☐ MECH 2074 Solidworks 4
- ☐ MECH 2084 Introduction to ProE/Creo 4
- ☐ MECH 2080 Special Projects 3
- ☐ MECH 2090 Advanced CAD 3

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:
- ☐ ENGL 1107 Composition 4
OR
- ☐ ENGL 2105 Business and Technical Writing 4
- ☐ SPCH 1500 Intercultural Communications 3
OR
- ☐ SPCH 1200 Interpersonal Communications 3
- ☐ General Education/MnTC Courses 8

Also see: Mechanical CAD Drafter diploma, Advanced CAD Drafting certificate, and Mechanical CAD Operator

Start Dates

Fall Semester .... August
Spring Semester .... January *(with instructor approval)*

Faculty Contact

Paul Klevann 763-576-4188

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence*
Full Time

	Fall Semester		Spring Semester	
1ST YEAR	MECH 1200	4	ENGL 1107/2105	4
	MECH 1216	5	MACH 1090	2
	MECH 2064	4	MECH 1229	3
	MATH 1070	3	MECH 2055	3
	MATH 1080	2	MECH 2074	4
	TOTAL	**18**	**TOTAL**	**16**
	Fall Semester		**Spring Semester**	
2ND YEAR	MECH 1235	4	MECH 1245	3
	MECH 2035	3	MECH 2045	4
	MECH 2084	4	MECH 2080	3
	SPCH 1200/1500	3	MECH 2090	3
	MnTC	4	MnTC	4
	TOTAL	**18**	**TOTAL**	**17**

*Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.

ANOKA
TECHNICAL COLLEGE
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2018-2019
Mechanical CAD Drafter
Diploma

Technical Requirements 54
General Education/MnTC 4
Total Credits 58

Program Information

The Anoka Technical College Mechanical CAD Drafter diploma is a 58-credit program that consists of technical courses designed to develop skills in mechanical drafting, design, and related fields.

All manufactured goods are created following a design process and this process needs to be documented. This documentation includes three-dimensional computer models, detailed two-dimensional drawings, bill of materials, engineering and manufacturing changes, physical prototypes, and more. The ability to follow strict industry standards while utilizing creativity to solve and document complex problems is the job of a mechanical designer.

In addition to drafting and detailing skills, the students receive training in related areas such as industrial materials, manufacturing methods, machining, and professional communication.

Students also receive hands-on training in Anoka Technical College's computer aided drafting lab. (AutoCAD, Inventor, ProE/Creo, and Solidworks)

The primary goal of the Mechanical Drafting and Design program is to provide all graduates with the solid technical foundation necessary to ensure their success in a wide variety of employment opportunities. To accomplish this goal, program learning outcomes and program objectives are defined and assessed for continuous improvement.

Program Objectives. Graduates two to three years into their careers should have the foundation to:

1. Identify, create and evaluate solutions to complex engineering-related problems in a timely and professional manner utilizing the skills developed in the areas of design, manufacturing and mechanics.

2. Solve technical problems while considering the local, national, and global requirements and impact of the solution.

3. Successfully function as a team member and leader.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities.
2. Apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge.
3. Conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
4. Function effectively as a member of a technical team.
5. Identify, analyze, and solve narrowly defined engineering technology problems.
6. Apply written, oral, and graphical communication in both technical and non-technical environments; and identify and use appropriate technical literature.
7. Understand the need for and an ability to engage in self-directed continuing professional development.
8. Understand and commit to addressing professional and ethical responsibilities, including a respect for diversity.
9. Commit to quality, timeliness, and continuous improvement.
10. Demonstrate knowledge and technical competency appropriate to the objectives of the program in engineering materials, applied mechanics, and manufacturing methods.
11. Demonstrate knowledge and technical competency appropriate to the objectives of the program in applied drafting practice emphasizing mechanical components and systems, as well as fundamentals of descriptive geometry, orthographic projection, sectioning, tolerancing and dimensioning, and basic computer aided drafting and design with technical depth in at least one of these areas.
12. Demonstrate knowledge and technical competency appropriate to the objectives of the program in the application of physics and engineering materials having an emphasis in applied mechanics, or in-depth application of physics having emphasis in mechanical components and design.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Mechanical Drafting and Design Technology program graduates find employment with manufacturing companies, engineering firms, electro-mechanical companies, and contract firms. Mechanical Drafting and Design Technology graduates have the necessary knowledge and an excellent foundation to begin their careers as mechanical drafters in engineering departments that design and manufacture hard goods products of every description. Most mechanical drafters begin as detail drafters, making the drawings required for the manufacture of products. Mechanical drafters can advance to supervisory positions within the department or may advance to assistant engineers as they gain experience. Other areas of advancement include purchasing and sales.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

(continued)

2018-2019
Mechanical CAD Drafter
Diploma

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 54 Credits

- ☐ MATH 1070 Technical Mathematics I 3
- ☐ MATH 1080 Technical Mathematics II 2
- ☐ MACH 1090 Machining Fundamentals 2
- ☐ MECH 1200 Mechanical CAD I 4
- ☐ MECH 1216 Drafting Standards 5
- ☐ MECH 1229 Materials and Processes 3
- ☐ MECH 1235 Statics and Strengths of Materials 4
- ☐ MECH 1245 Sheet Metal Concepts and Applications 3
- ☐ MECH 2035 Process Design Drafting 3
- ☐ MECH 2045 Design Projects 4
- ☐ MECH 2055 Geometric Dimensioning and Tolerancing 3
- ☐ MECH 2064 Introduction to Inventor 4
- ☐ MECH 2074 Solidworks 4
- ☐ MECH 2080 Special Projects 3
- ☐ MECH 2084 Introduction to ProE/Creo 4

General Education/MnTC Requirements: 4 Credits

Four (4) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:
- ☐ ENGL 2105 Business and Technical Writing 4

Also see: Mechanical CAD Drafting & Design AAS, Advanced CAD Drafting certificate, and Mechanical CAD Operator

Start Dates

Fall Semester .... August
*Spring Semester .... January

Faculty Contact

Paul Klevann 763-576-4188

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence*
Full Time

	Fall Semester		Spring Semester	
1st YEAR	MATH 1070	3	MACH 1090	2
	MATH 1080	2	MECH 1229	3
	MECH 1200	4	MECH 2055	3
	MECH 1216	5	MECH 2074	4
	MECH 2064	4	**TOTAL**	**12**
	TOTAL	**18**		

	Fall Semester		Spring Semester	
2nd YEAR	ENGL 2105	4	MECH 1245	3
	MECH 1235	4	MECH 2045	4
	MECH 2035	3	MECH 2080	3
	MECH 2084	4	MECH 2090	3
	TOTAL	**15**	**TOTAL**	**13**

***Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.**

ANOKA
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Mechanical CAD Operator
Certificate

Total Technical Credits...............25

Program Information

The Anoka Technical College Mechanical CAD Operator certificate is a 25-credit program that consists of technical courses designed to develop skills in mechanical drafting.

In addition to drafting and detailing skills, the students receive training in related areas such as industrial materials, manufacturing methods, and professional communication. Students also receive hands-on training in Anoka Technical College's computer aided drafting lab. (AutoCAD, Inventor, ProE/Creo, and Solidworks)

The primary goal of the Mechanical Drafting and Design program is to provide all graduates with the solid technical foundation necessary to ensure their success in a wide variety of employment opportunities.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities.
2. Apply written, oral, and graphical communication in both technical and non-technical environments; and identify and use appropriate technical literature.
3. Understand the need for and an ability to engage in self-directed continuing professional development.
4. Commit to quality, timeliness, and continuous improvement.
5. Demonstrate knowledge and technical competency appropriate to the objectives of the program in engineering materials, applied mechanics, and manufacturing methods.
6. Demonstrate knowledge and technical competency appropriate to the objectives of the program in applied drafting practice emphasizing mechanical components and systems, as well as fundamentals of descriptive geometry, orthographic projection, sectioning, tolerancing and dimensioning, and basic computer aided drafting and design with technical depth in at least one of these areas.

Couse Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
* Minnesota Transfer: (www.mntransfer.org/students/plan/s_ agreements.php?numResults=25&archive=false&from_ inst=70&from_prog=&to_inst=&Search=Search)

* Anoka Technical College transfer student (www.anokatech.edu/ BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Mechanical Drafting and Design Technology program graduates find employment with manufacturing companies, engineering firms, electro-mechanical companies, and contract firms. Mechanical Drafting and Design Technology graduates have the necessary knowledge and an excellent foundation to begin their careers as mechanical drafters in engineering departments that design and manufacture hard goods products of every description. Most mechanical drafters begin as detail drafters, making the drawings required for the manufacture of products. Mechanical drafters can advance to supervisory positions within the department or may advance to assistant engineers as they gain experience. Other areas of advancement include purchasing and sales.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 25 Credits

☐ MACH 1090 Machining Fundamentals 2
☐ MECH 1200 Mechanical CAD I 4
☐ MECH 1216 Drafting Standards 5
☐ MECH 1229 Materials and Processes 3
☐ MECH 2074 Solidworks 4
☐ MECH 2090 Advanced CAD 3

Elective Select one (1) 4 credit course:
☐ MECH 2064 Introduction to Inventor 4
☐ MECH 2084 Introduction to ProE/Creo..................................4

Also see: Mechanical CAD Drafting and Design AAS, Mechanical CAD Drafter diploma, and Advanced CAD Drafting certificate

Start Dates

Fall Semester...August
Spring Semester ....January**

***Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.**

ANOKA
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2018-2019
Mechanical CAD Operator
Certificate

Faculty Contact

Paul Klevann.. 763-576-4188

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	Fall Semester		Spring Semester	
	MECH 1200	4	MACH 1090	2
	MECH 1216	5	MECH 1229	3
	MECH 2064/2084	4	MECH 2074	4
			MACH 2090	3
	*TOTAL	**13**	***TOTAL**	**12**

ANOKA
TECHNICAL COLLEGE
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Advanced CAD Drafting
Certificate

Total Technical Credits...............30

Program Information

The Anoka Technical College Advanced CAD certificate is a 30-credit program that consists of technical courses designed to develop skills in mechanical drafting, design, and related fields.

In addition to drafting and detailing skills, the student receives training in related areas, such as industrial materials, manufacturing methods, machining and industrial relations. Students also receive hands-on training in Anoka Technical College's computer-aided drafting (AutoCAD, Inventor, ProE/Creo and Solidworks) lab. Training in these programs opens up an entirely new area of job advancement, especially in large companies.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Mechanical Drafting and Design Technology program graduates find employment with manufacturing companies, big and small, engineering firms, electro-mechanical companies and contract firms.

Mechanical Drafting and Design Technology graduates have the necessary knowledge and an excellent foundation to begin their careers as mechanical drafters in engineering departments that design and manufacture hard goods products of every description. Most mechanical drafters begin as detail drafters, making the drawings required for the manufacture of products. Mechanical drafters can advance to supervisory positions within the department or may advance to assistant engineer as they gain experience. Other areas of advancement include purchasing and sales.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 30 Credits

- ☐ MECH 1200 Mechanical CAD I 4
- ☐ MECH 1216 Drafting Standards 5
- ☐ MECH 1243 Descriptive Geometry and Applications 3
- ☐ MECH 2031 Process Design Drafting 3
- ☐ MECH 2055 Geometric Dimensioning and Tolerancing 3
- ☐ MECH 2064 Introduction to Inventor 4
- ☐ MECH 2074 Solidworks 4

Possible Electives. Select four (4) credits:

- ☐ MACH 1090 Machining Fundamentals 2
- ☐ MECH 1228 Materials and Processes 4
- ☐ MECH 2084 Introduction to ProE/Creo..................................4
- ☐ MECH 2090 Advanced CAD 3

Also see: Mechanical CAD Drafting & Design AAS degree, Mechanical CAD Drafter diploma, and Mechanical CAD Operator certificate

Start Dates

Fall Semester..August
Spring Semester ....January**

***Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.**

Faculty Contact

Paul Klevann.. 763-576-4188

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester		Spring Semester	
1st YEAR	MECH 1200 4		MECH 1243 3	
	MECH 1216 5		MECH 2031 3	
	MECH 2064 4		MECH 2055 3	
	TOTAL 13		MECH 2074 4	
			TOTAL 13	

ANOKA
TECHNICAL COLLEGE
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2018-2019
Welding
Associate of Applied Science (AAS) Degree

Technical Requirements 51
General Education/MnTC 15
Total Credits 66

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Welding is a 66-credit program designed for individuals seeking a well rounded welding background. The degree program also offers a balance of general education courses to complement the welding courses and to provide students with opportunity to capitalize on a broad-based welding education.

The Welding program consists of technical courses, specifically designed to develop exceptional welding skills utilizing the major welding processes that are vital to industry.

The technical courses are broken out into semester-long certificates to provide quick access into a welding career.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Graduates of the WT Program will demonstrate entry level competencies as defined by the WT Program, WT Program Advisory Board and AWS.
2. The WT Program will retain qualified and committed faculty who are involved in ongoing educational/professional growth activities.
3. The WT Program will provide a student-centered educational process.
4. The WT Program will build and maintain relationships within the community and business/industry community.
5. The WT Program will maintain adequate enrollment of students.

Certification

The Welding program not only provides students with a thorough background in welding and related theory, but also prepares students with the knowledge and skills needed to take three national certification examinations:
• American Society of Mechanical Engineers;
• American Petroleum Institute; and
• American Welding Society's Welding Code

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The diversification of the welding industry impacts virtually every industry around the globe. From the depth of the world's oceans to the far-reaching corners of outer space, there is a welding position for every hardworking, ambitious, smart individual who is ready and willing to constantly improve and strive for excellence.

A career choice in welding offers a vast array of options for employment and continuing personal development. Welding is the most common way to permanently join metal parts. Heat is applied to the pieces that are being joined, melting and fusing them together which forms a permanent bond.

Therefore, welding plays a key role in industry production lines, laboratories, research and development, national defense, sales and service, NASCAR and drag racing, custom motorcycle building, artwork, sculptures, pipelines, power plants, refineries, construction, maintenance, repair and much more.

Wages/Outlook/Advancement

Welders and solderers can advance to more skilled jobs with additional training and experience. For example, experienced welders may become technicians, supervisors, inspectors, or instructors. Other experienced welders and solderers open their own repair shops.

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 51 Credits

Basic Welding Certificate		**17**
WELD 1002	Math for Welders	1
WELD 1004	Oxy-Fuel Applications	1
WELD 1006	Oxy-Fuel Processes	1
WELD 1008	Blueprint Reading I	2
WELD 1012	Processes and Power Sources I	3
WELD 1014	Gas Tungsten Arc Welding I	3
WELD 1016	Gas Metal Arc Welding I	3
WELD 1018	Shielded Metal Arc Welding I	3
Welding Technology Diploma		**17**
WELD 1022	Blueprint Reading II	3
WELD 1024	Metals Theory I	2
WELD 1026	Processes and Power Source II	3
WELD 1028	Gas Tungsten Arc Welding II	3
WELD 1034	Gas Metal Arc Welding II	3
WELD 1036	Shielded Metal Arc Welding II	3
Fabricator Certificate		**17**
WELD 1209	Basic Pipe Welding	5
WELD 2000	Basic Pipe Layout	3
WELD 2004	Metals Theory II	3
WELD 2006	Welding Code Interpretation	2
WELD 2008	Blueprint Reading III	4

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(continued)

Welding
Associate of Applied Science (AAS) Degree

General Education: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:

MATH 1500　　Mathematical Ideas 3
General Education/MnTC Electives 12

Also see: Welding Technology diploma, Basic Welding certificate, Welding Fabricator certificate, and Pipe Welding certificate

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Jay Gerdin 763-576-4055
Rich Godeen... 763-576-4122
Lisa Glendower.. 763-576-4086

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR

First Semester		Second Semester	
WELD 1002	1	WELD 1022	3
WELD 1004	1	WELD 1024	2
WELD 1006	1	WELD 1026	3
WELD 1008	2	WELD 1028	3
WELD 1012	3	WELD 1034	3
WELD 1014	3	WELD 1036	3
WELD 1016	3	**TOTAL**	**17**
WELD 1018	3		
TOTAL	**17**		

2nd YEAR

Third Semester		Fourth Semester	
WELD 1209	5	MATH 1500	3
WELD 2000	3	General Ed/MnTC courses	12
WELD 2004	3	**TOTAL**	**15**
WELD 2006	2		
WELD 2008	4		
TOTAL	**17**		

ANOKA
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Welding Technology
Diploma

Total Technical Credits...............34

Program Information

The Anoka Technical College Welding Technology diploma is a 34-credit program (the 34 total credits include 17 credits from the Basic Welding certificate) specifically designed to develop exceptional welding skills utilizing the major welding processes that are vital to industry.

The Welding Technology diploma integrates theory with technical skills. Through the rigorous curriculum, students will develop fundamental knowledge of GMAW, GTAW, SMAW and Oxy fuel welding processes. Blueprint and math ability are incorporated in the coursework. Students will also learn metal comprehension, industry safety practices and related equipment applications.

Classes available at Anoka Technical College and Cambridge-Isanti High School.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.

1. Students will weld to visual acceptance criteria per applicable American Welding Society standards in Gas Tungsten Arc Welding, Gas Metal Arc Welding and the Shielded Metal Arc Welding process.
2. Students will prepare weld joints and perform welding operations using welding symbol information.
3. Students will follow established procedures and policies regarding personal protective gear, shop safety and welding equipment.
4. Students will visually examine all work for discontinuities and defects with the knowledge of industry specification.
5. Students will work in a team environment and accept constructive criticism.
6. Students will operate safely and proficiently using Oxy-fuel, Plasma and Carbon Air Arc equipment.
7. Students will demonstrate the ability to weld to entry level standard per American Welding Society on carbon steel, stainless steel and aluminum

Certification

The Welding program not only provides students with a thorough background in welding and related theory, but also prepares students with the knowledge and skills needed to take the national certification examination:

•   American Welding Society's Welding Code

Course Prerequisites

None

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

•   Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

•   Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The diversification of the welding industry impacts virtually every industry around the globe. From the depth of the world's oceans to the far-reaching corners of outer space, there is a welding position for every hardworking, ambitious, smart individual who is ready and willing to constantly improve and strive for excellence.

A career choice in welding offers a vast array of options for employment and continuing personal development. Welding is the most common way to permanently join metal parts. Heat is applied to the pieces that are being joined, melting and fusing them together which forms a permanent bond.

Therefore, welding plays a key role in industry production lines, laboratories, research and development, national defense, sales and service, NASCAR and drag racing, custom motorcycle building, artwork, sculptures, pipelines, power plants, refineries, construction, maintenance, repair and much more.

Wages/Outlook/Advancement

Welders and solderers can advance to more skilled jobs with additional training and experience. For example, experienced welders may become technicians, supervisors, inspectors, or instructors. Other experienced welders and solderers open their own repair shops.

Wage information is available from the Minnesota Department of Education and Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 34 Credits

Basic Welding Certificate ....17 Credits
☐ WELD 1002 Math for Welders 1
☐ WELD 1004 Oxy-Fuel Applications..1
☐ WELD 1006 Oxy-Fuel Processes 1
☐ WELD 1008 Blueprint Reading I...2
☐ WELD 1012 Processes and Power Sources I...........................3
☐ WELD 1014 Gas Tungsten Arc Welding I................................3
☐ WELD 1016 Gas Metal Arc Welding I 3
☐ WELD 1018 Shielded Metal Arc Welding I..............................3

ANOKA TECHNICAL COLLEGE
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(continued)

Welding Technology
Diploma

Additional Credits for Diploma ....17 Credits
☐ WELD 1022 Blueprint Reading II 3
☐ WELD 1024 Metals Theory I.. 2
☐ WELD 1026 Processes and Power Sources II 3
☐ WELD 1028 Gas Tungsten Arc Welding II............................. 3
☐ WELD 1034 Gas Metal Arc Welding II 3
☐ WELD 1036 Shielded Metal Arc Welding II 3

Also see: Welding AAS, Basic Welding certificate, Welding Fabricator certificate, and Pipe Welding certificate

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Jay Gerdin 763-576-4055
Rich Godeen.. 763-576-4122
Lisa Glendower... 763-576-4086

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	First Semester		Second Semester	
	WELD 1002	1	WELD 1022	3
	WELD 1004	1	WELD 1024	2
	WELD 1006	1	WELD 1026	3
	WELD 1008	2	WELD 1028	3
	WELD 1012	3	WELD 1034	3
	WELD 1014	3	WELD 1036	3
	WELD 1016	3	**TOTAL**	**17**
	WELD 1018	3		
	TOTAL	**17**		

ANOKA
TECHNICAL COLLEGE
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Basic Welding
Certificate

Total Technical Credits...............17

Program Information

The Anoka Technical College Basic Welding certificate is a 17-credit program designed for individuals seeking a well-rounded foundation in welding. The Basic Welding certificate is designed for individuals who want quick access into the welding careers.

Classes available at Anoka Technical College and Cambridge-Isanti High School.

Course Prerequisites

None.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The diversification of the welding industry impacts virtually every industry around the globe. From the depth of the world's oceans to the far-reaching corners of outer space, there is a welding position for every hardworking, ambitious, smart individual who is ready and willing to constantly improve and strive for excellence.

A career choice in welding offers a vast array of options for employment and continuing personal development. Welding is the most common way to permanently join metal parts. Heat is applied to the pieces that are being joined, melting and fusing them together which forms a permanent bond.

Therefore, welding plays a key role in industry production lines, laboratories, research and development, national defense, sales and service, NASCAR and drag racing, custom motorcycle building, artwork, sculptures, pipelines, power plants, refineries, construction, maintenance, repair and much more.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 17 Credits

- □ WELD 1002 Math for Welders 1
- □ WELD 1004 Oxy-Fuel Applications 1
- □ WELD 1006 Oxy-Fuel Processes 1
- □ WELD 1008 Blueprint Reading I 2
- □ WELD 1012 Processes and Power Sources I 3
- □ WELD 1014 Gas Tungsten Arc Welding I 3
- □ WELD 1016 Gas Metal Arc Welding I 3
- □ WELD 1018 Shielded Metal Arc Welding I 3

Also see: Welding AAS, Welding Technology diploma, Welding Fabricator certificate, and Pipe Welding certificate

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Jay Gerdin 763-576-4055
Rich Godeen.. 763-576-4122
Lisa Glendower... 763-576-4086

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
The Basic Welding certificate is designed to be completed in one semester.

First Semester (1st YEAR)

Course	Credits
WELD 1002	1
WELD 1004	1
WELD 1006	1
WELD 1008	2
WELD 1012	3
WELD 1014	3
WELD 1016	3
WELD 1018	3
TOTAL	**17**

ANOKA TECHNICAL COLLEGE
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Program Information

The Anoka Technical College Welding Fabricator certificate is 17-credit program which offers individuals the opportunity to develop skills necessary for construction, manufacturing, building, and fabrication for real weldments. Students entering this certificate program have good welding ability, but seek greater applications skills.

Certifications

The Welding program not only provides students with a thorough background in welding and related theory, but also prepares students with the knowledge and skills need to take three national certification examinations:
• American Society of Mechanical Engineers
• American Petroleum Institute
• American Welding Society's Welding Code

Admission Requirements

Must complete the Welding Technology diploma or be in the Welding Associate of Applied Science (AAS) degree.

Course Prerequisites

None

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

The courses in the Fabricator certificate serves as the third semester courses in the Associate of Applied Arts (AAS) degree in Welding program.

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The diversification of the welding industry impacts virtually every industry around the globe. From the depth of the world's oceans to the far-reaching corners of outer space, there is a welding position for every hardworking, ambitious, smart individual who is ready and willing to constantly improve and strive for excellence.

A career choice in welding offers a vast array of options for employment and continuing personal development. Welding is the most common way to permanently join metal parts. Heat is applied to the pieces that are being joined, melting and fusing them together which forms a permanent bond.

Therefore, welding plays a key role in industry production lines, laboratories, research and development, national defense, sales and service, NASCAR and drag racing, custom motorcycle building, artwork, sculptures, pipelines, power plants, refineries, construction, maintenance, repair and much more.

Wages/Outlook/Advancement

Welders and solderers can advance to more skilled jobs with additional training and experience. For example, experienced welders may become technicians, supervisors, inspectors, or instructors. Other experienced welders and solderers open their own repair shops.

Wage information is available from the Minnesota Department of Education and Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 17 Credits

☐ WELD 1209 Basic Pipe Welding 3
☐ WELD 2000 Basic Pipe Layout 5
☐ WELD 2004 Metals Theory II 3
☐ WELD 2006 Welding Code Interpretation 2
☐ WELD 2008 Blueprint Reading III 4
Also see: Welding AAS, Welding Technology diploma, Basic Welding certificate and Pipe Welding certificate

Start Dates

Fall Semester...August

Faculty Contact

Jay Gerdin 763-576-4055
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence:
The Fabricator certificate is designed to be completed in one semester.

1st YEAR	Fall Semester	
	WELD 1209 3	
	WELD 2000 5	
	WELD 2004 3	
	WELD 2006 2	
	WELD 2008 4	
	TOTAL 17	

ANOKA TECHNICAL COLLEGE
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Program Information

The Anoka Technical College offers a 17-credit Pipe Welding certification which is designed for individuals seeking the highest welding skill level, the most demanding manual welding discipline.

Graduates from the Pipe Welding certificate have the skills required to master manual pipe welding and obtain the highest paying jobs in welding.

Certificationss

The Welding program not only provides students with a thorough background in welding and related theory, but also prepares students with the knowledge and skills need to take three national certification examinations:
• American Society of Mechanical Engineers
• American Petroleum Institute
• American Welding Society's Welding Code

Admission Requirements

Must complete Fabricator certificate or the Welding Associate of Applied Science (AAS) degree.

Course Prerequisites

None

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_ agreements.php?numResults=25&archive=false&from_ inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/ BecomeStudent/Transfers.aspx)

Industry Information

The diversification of the welding industry impacts virtually every industry around the globe. From the depth of the world's oceans to the far-reaching corners of outer space, there is a welding position for every hardworking, ambitious, smart individual who is ready and willing to constantly improve and strive for excellence.

A career choice in welding offers a vast array of options for employment and continuing personal development. Welding is the most common way to permanently join metal parts. Heat is applied to the pieces that are being joined, melting and fusing them together which forms a permanent bond.

Therefore, welding plays a key role in industry production lines, laboratories, research and development, national defense, sales and service, NASCAR and drag racing, custom motorcycle building, artwork, sculptures, pipelines, power plants, refineries, construction, maintenance, repair and much more.

Wages/Outlook/Advancement

Welders and solderers can advance to more skilled jobs with additional training and experience. For example, experienced welders may become technicians, supervisors, inspectors, or instructors. Other experienced welders and solderers open their own repair shops.

Wage information is available from the Minnesota Department of Education and Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 17 Credits

☐ WELD 2012 GMAW 5G & 6G Pipe Welding 2
☐ WELD 2014 GTAW 5G & 6G Pipe Welding 5
☐ WELD 2016 SMAW 5G & 6G Pipe WeldingII 5
☐ WELD 2018 Blueprint Reading IV 5
Also see: Welding AAS, Welding Technology diploma, Fabricator certificate and Basic Welding certificate

Start Dates

Spring Semester ....January

Faculty Contact

Jay Gerdin 763-576-4055
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
The Pipe Welding certificate is designed to be completed in one semester.

1st YEAR	Spring Semester	
	WELD 2012 2	
	WELD 2014 5	
	WELD 2016 5	
	WELD 2018 5	
	TOTAL 17	

ANOKA TECHNICAL COLLEGE
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Golf Course Grounds Management

Golf Course Grounds Management

Associate of Applied Science (AAS) Degree

Technical Requirements 54
General Education/MnTC 15
Total Credits 69

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Golf Course Grounds Management is a 69-credit program that prepares students for employment in the golf course and grounds management industries as golf course superintendents/assistant superintendents, grounds supervisors/assistant supervisors and turf technicians.

The program includes coursework in plant and soil science, turfgrass science and management, water management, golf course grounds site construction, turf power equipment and golf course grounds site maintenance.

Complementary coursework is offered in communications, computer applications and customer service. Golf Course Grounds Management program graduates manage the landscape and turf environment for golf courses, parks, commercial and residential sites, athletic complexes, and municipalities.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Collaborate effectively with others in situations requiring teamwork, leadership, and negotiations.
2. Integrate sustainable golf course grounds management cultural practices with conventional cultural practices.
3. Apply technical and theoretical skills and knowledge to golf course situations.
4. Anticipate biological issues within field-related situations and conditions.
5. Research, organize, and interpret information from various technical sources.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

The Golf Course Grounds Management program has articulated partnerships with two four-year institutions:
- The University of Minnesota-Crookston campus for a Bachelor of Science (BS) degree in Golf Facilities and Turf Systems Management
- Suny Cobleskill in New York for a Bachelor of Technology degree in Golf Turf Management

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The Golf Course Grounds Management program develops skills in turfgrass care, crew supervision and management, fertilizer and pesticide application.

Program graduates may find employment in a variety of settings, including golf courses, athletic facilities and industrial grounds maintenance.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 54 Credits

☐ HORT 1045	Plant Pests II		4
☐ TURF 1015	Soil Science and Fertility		4
☐ TURF 1030	Plant Pests I		3
☐ TURF 1050	Woody Plant Materials I		3
☐ TURF 1060	Woody Plant Materials II		3
☐ TURF 1210	Turfgrass and Grounds Management		3
☐ TURF 1220	Introduction to Turfgrass Species		3
☐ TURF 1230	Landscape Construction for Golf Course		3
☐ TURF 1241	Turfgrass Diseases		3
☐ TURF 1250	Golf Course Construction and Design		3
☐ TURF 1255	Turf Power and Equipment I		2
☐ TURF 1261	Turf Power and Equipment II		2
☐ TURF 1270	Supervised Occupational Experience I		6
☐ TURF 1280	Golf Course Planning and Operations		3
☐ TURF 1300	Irrigation Installation and Design		3
☐ TURF 1515	Supervised Occupational Experience II		3
☐ TURF 1310	Sports Turf Management		3

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:

☐ NSCI 1020	Plant Science		3
☐ General Education/MnTC Courses			12

Also see: Golf Course Grounds Management diploma and Grounds Maintenance Technician certificate

ANOKA
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2018-2019
Golf Course Grounds Managment
Associate of Applied Science (AAS) Degree

Start Dates
Fall Semester...August
Spring Semester ....January

Faculty Contact
Marlin Murphy.. 763-576-4168
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester		Spring Semester	
1st YEAR	TURF 1030	3	HORT 1045	4
	TURF 1050	3	TURF 1015	4
	NSCI 1020	3	TURF 1220	3
	TURF 1210	3	TURF 1270	6
	TOTAL	**12**	**TOTAL**	**17**
	Fall Semester		**Spring Semester**	
2nd YEAR	TURF 1241	3	TURF 1060	3
	TURF 1250	3	TURF 1230	3
	TURF 1261	2	TURF 1255	2
	TURF 1300	3	TURF 1280	3
	TURF 1515	3	TURF 1310	3
	TOTAL	**14**	**TOTAL**	**14**

Does not include all MnTC credits.

ANOKA TECHNICAL COLLEGE
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2018-2019
Golf Course Grounds Management
Diploma

Technical Requirements............54
General Education/MnTC..........3
Total Credits..............................57

Program Information

The Anoka Technical College Golf Course Grounds Management diploma is a 57-credit program that prepares students for employment in the golf course and grounds management industries as golf course superintendents/assistant superintendents, grounds supervisors/assistant supervisors and turf technicians.

The program includes coursework in plant and soil science, turfgrass science and management, water management, golf course grounds site construction, turf power equipment and golf course grounds site maintenance.

Complementary coursework is offered in communications,computer applications and customer service. Golf Course Grounds Management program graduates manage the landscape and turf environment for golf courses, parks, commercial and residential sites, athletic complexes, and municipalities.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Collaborate effectively with others in situations requiring teamwork, leadership, and negotiations.
2. Integrate sustainable golf course grounds management cultural practices with conventional cultural practices.
3. Apply technical and theoretical skills and knowledge to golf course situations.
4. Anticipate biological issues within field-related situations and conditions.
5. Research, organize, and interpret information from various technical sources.

Course Prerequisites

None

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

The Golf Course Grounds Management program has articulated partnerships with two four-year institutions:
- The University of Minnesota-Crookston campus for a Bachelor of Science (BS) degree in Golf Facilities and Turf Systems Management
- Suny Cobleskill in New York for a Bachelor of Technology degree in Golf Turf Management

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The Golf Course Grounds Management program develops skills in turfgrass care, crew supervision and management, fertilizer and pesticide application.

Program graduates may find employment in a variety of settings, including golf courses, athletic facilities and industrial grounds maintenance.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 54 Credits

☐ TURF 1015	Soil Science and Fertility	4
☐ TURF 1030	Plant Pests I	3
☐ TURF 1050	Woody Plant Materials I	3
☐ HORT 1045	Plant Pests II	4
☐ TURF 1060	Woody Plant Materials II	3
☐ TURF 1210	Turfgrass and Grounds Management	3
☐ TURF 1220	Introduction to Turfgrass Species	3
☐ TURF 1230	Landscape Construction for Golf Course	3
☐ TURF 1241	Turfgrass Diseases	3
☐ TURF 1250	Golf Course Construction and Design	3
☐ TURF 1255	Turf Power and Equipment I	2
☐ TURF 1261	Turf Power and Equipment II	2
☐ TURF 1270	Supervised Occupational Experience I	6
☐ TURF 1280	Golf Course Planning and Operations	3
☐ TURF 1300	Irrigation Installation and Design	3
☐ TURF 1310	Sports Turf Management	3
☐ TURF 1515	Supervised Occupational Experience II	3

General Education/MnTC Requirements: 3 Credits

Three (3) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Students are required to take:
☐ NSCI 1020   Plant Science.. 3
Also see: Golf Course Grounds Management AAS and Grounds Technician certificate

ANOKA TECHNICAL COLLEGE
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2018-2019
Golf Course Grounds Management
Diploma

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Marlin Murphy.. 763-576-4168

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester		Spring Semester	
1st YEAR	HORT 1030	3	HORT 1015	4
	HORT 1050	3	HORT 1045	4
	NSCI 1020	3	TURF 1220	3
	TURF 1210	3	TURF 1270	6
	TOTAL	**12**	**TOTAL**	**17**
	Fall Semester		**Spring Semester**	
2nd YEAR	TURF 1240	2	HORT 1060	3
	TURF 1250	3	TURF 1230	3
	TURF 1260	3	TURF 1255	2
	TURF 1300	3	TURF 1280	3
	TURF 1515	3	Technical Elective	3
	Technical Elective	3	**TOTAL**	**14**
	TOTAL	**17**		

ANOKA
TECHNICAL COLLEGE
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Grounds Maintenance Technician
Certificate

Technical Requirements 28
Total Credits 28

Program Information

The Anoka Technical College Grounds Maintenance Technician certificate is a 28-credit program that prepares individuals for employment in the golf course and grounds management industries as golf course superintendents/assistant superintendents, grounds supervisors/assistant supervisors, and turf technicians. These individuals manage the landscape and turf environment for golf courses, parks, commercial and residential sites, athletic complexes, and municipalities. This program includes coursework in plant and soil science, turfgrass science and management, water management, golf course grounds site construction, turf power equipment and golf course grounds site maintenance.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Collaborate effectively with others in situations requiring teamwork, leadership, and negotiations.
2. Integrate sustainable golf course grounds management cultural practices with conventional cultural practices.
3. Apply technical knowledge and skills to golf course situations.
4. Anticipate biological issues within field-related situations and conditions

Course Prerequisites

None.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

The Golf Course Grounds Management program has articulated partnerships with two four-year institutions:
• The University of Minnesota-Crookston campus for a Bachelor of Science (BS) degree in Golf Facilities and Turf Systems Management
• Suny Cobleskill in New York for a Bachelor of Technology degree in Golf Turf Management

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The Golf Course Grounds Management program develops skills in turfgrass care, crew supervision and management, and fertilizer and pesticide application. Program graduates may find employment in a variety of settings, including golf courses, athletic facilities and industrial grounds maintenance.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 28 Credits

☐ HORT 1045 Plant Pests II 4
☐ TURF 1030 Plant Pests I...3
☐ TURF 1050 Woody Plant Materials I 3
☐ TURF 1210 Turfgrass and Grounds Management...................3
☐ TURF 1220 Introduction to Turfgrass Species 3
☐ TURF 1270 Supervised Occupational Experience I................6

Technical Electives ....6 Credits
Six (6) credits of electives are required from the following list:
☐ TURF 1060 Woody Plant Materials II 3
☐ TURF 1230 Landscape Construction for Golf Course 3
☐ TURF 1241 Turfgrass Diseases 3
☐ TURF 1250 Golf Course Construction and Design.................3
☐ TURF 1280 Golf Couse Planning and Operations 3
☐ TURF 1515 Supervised Occupational Experience II...............3
Also see: Golf Course Grounds Management AAS or Grounds Maintenance Technician diploma

Start Dates

Fall Semester.. ......August
Spring Semester .... January

Faculty Contact

Marlin Murphy... 763-576-4168
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester		Spring Semester	
1ST YEAR	TURF 1030 3		TURF 1045 4	
	TURF 1050 3		TURF 1220........................3	
	TURF 1210 3		TURF 1270........................6	
	Technical Electives.............3		Technical Electives.............3	
	TOTAL 12		**TOTAL 16**	

ANOKA
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Health Science Technology

Emergency Medical Services
Certificate

Total Technical Credits..............9

Program Information

The Anoka Technical College Emergency Medical Services (EMS) certificate is a nine (9)-credit program designed to prepare students for gainful employment in the field of EMS or to transition to further their EMS education.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Prepare entry level EMS providers to be employable upon completion
2. Provide up-to-date EMS education to all interested parties
3. Be a sound, responsible partner to stakeholders in the EMS industry
4. Create pathways of transferability to higher level EMS Education Programs
5. Manage the finances of the program in a cost-effective, prudent manner

Course Prerequisites

None.

Background Study

Minnesota Law requires that any person who provides services that involve direct contact with patients and/or residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state. An individual who is disqualified from having direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate at a clinical site. The student has the right to request reconsideration of the disqualification. For consideration to continue in the program, the student must request reconsideration and provide a copy of such request. The student is responsible for requesting the commissioner to reconsider the disqualification. The college will withdraw any student who is disqualified by the Minnesota Department of Health.

Accreditation/Certifications

The EMS program follows the National Highway Traffic Safety Administration curriculum and is approved by the State of Minnesota Emergency Medical Services Regulatory Board (EMSRB).

Graduation Requirements

All Students completing the Emergency Medical Program must complete all courses with a grade of a C or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Emergency Medical Technicians (EMTs) are found in many career areas across the nation and beyond. Emergency Medical Services (EMS) encompasses all of those that respond to emergency situations. EMTs are entry-level EMS providers capable of performing lifesaving interventions within their defined scope of practice.

Wages/Outlook/Advancement

Partnerships between the college and the emergency health care industries further enhance the knowledge and skills of our students. With advanced training, students become more marketable as emergency providers in the emergency healthcare field. Education as an emergency medical responder (EMR), emergency medical technician (EMT) or an advanced emergency medical technician (AEMT) can lead to a satisfying and fulfilling profession in the emergency medical system and enhances many careers throughout our nation's workforce.

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 9 Credits

☐ EMED 1113   Emergency Medical Technician 1........................4
☐ EMED 1114   Emergency Medical Technician 2........................5

Start Dates

Fall Semester.. August
Spring Semester .... January

Faculty Contact

Brad Wright.. 763-576-4058

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	First Semester	
	EMED 1113 4	
	EMED 1114 5	
	TOTAL 9	

ANOKA TECHNICAL COLLEGE
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Emergency Medical Services
Certificate

Program Information

The Anoka Technical College Emergency Medical Services (EMS) certificate is a 21-credit program designed to prepare students for gainful employment in the field of EMS or to transition to further their EMS education.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Prepare entry level EMS providers to be employable upon completion
2. Provide up-to-date EMS education to all interested parties
3. Be a sound, responsible partner to stakeholders in the EMS industry
4. Create pathways of transferability to higher level EMS Education Programs
5. Manage the finances of the program in a cost-effective, prudent manner

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better. *EMED 1113, EMED 1114 and NREMT or/current Residency EMT certification is a prerequisite to the other EMED courses.

Background Study

Minnesota Law requires that any person who provides services that involve direct contact with patients and/or residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state. An individual who is disqualified from having direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate at a clinical site. The student has the right to request reconsideration of the disqualification. For consideration to continue in the program, the student must request reconsideration and provide a copy of such request. The student is responsible for requesting the commissioner to reconsider the disqualification. The college will withdraw any student who is disqualified by the Minnesota Department of Health.

Accreditation/Certifications

The EMS program follows the National Highway Traffic Safety Administration curriculum and is approved by the State of Minnesota Emergency Medical Services Regulatory Board (EMSRB).

Graduation Requirements

All Students completing the Emergency Medical Program must complete all courses with a grade of a C or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Emergency Medical Technicians (EMTs) are found in many career areas across the nation and beyond. Emergency Medical Services (EMS) encompasses all of those that respond to emergency situations. EMTs are entry-level EMS providers capable of performing lifesaving interventions within their defined scope of practice.

Wages/Outlook/Advancement

Partnerships between the college and the emergency health care industries further enhance the knowledge and skills of our students. With advanced training, students become more marketable as emergency providers in the emergency healthcare field. Education as an emergency medical responder (EMR), emergency medical technician (EMT) or an advanced emergency medical technician (AEMT) can lead to a satisfying and fulfilling profession in the emergency medical system and enhances many careers throughout our nation's workforce.

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 17 Credits

☐ EMED 1113 Emergency Medical Technician 1........................4
☐ EMED 1114 Emergency Medical Technician 2........................5
☐ *EMED 1120 ECG Recognition and Treatment for EMS 1
☐ *EMED 1125 EMS Operations...2
☐ *EMED 1130 ALS Clinical 2
☐ *EMED 1135 Basic EMS Pharmacology 1
☐ HLTH 1040 Medical Terminology..2

General Education/MnTC Requirements: 4 Credits

BIOL 1130   Human Biology...4

ANOKA
TECHNICAL COLLEGE
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2018-2019
Emergency Medical Services
Certificate

Start Dates

Fall Semester... August
Spring Semester .... January

Faculty Contact

Brad Wright.. 763-576-4058

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	First Semester		Second Semester	
	EMED 1113	4	EMED 1120	1
	EMED 1114	5	EMED 1125	2
	HLTH 1040	2	EMED 1130	2
			EMED 1135	1
			BIOL 1130	4
	TOTAL	**11**	**TOTAL**	**10**

ANOKA TECHNICAL COLLEGE
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Health Information Technology
Associate of Applied Science (AAS) Degree

Technical Requirements 45
General Education/MnTC 15
Total Credits 60

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Health Information Technology is a 60-credit program that prepares students for a career in health care and settings where health information is utilized. A student graduating with a degree in Health Information Technology is well prepared to assume an entry-level position in this professional field. Specifically, program outcomes are designed to assure that graduates of the program will be prepared to demonstrate: essential professional and technical knowledge, skills and competencies fundamental to the health information management profession; effective written and oral communication skills; skills in using resources and technology; and problem solving, teamwork and critical thinking skills.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Successful completion of the degree will allow the student to sit for the Registered Health Information Technician (RHIT) exam.
2. Successful completion of the degree will allow the student to work in a hospital/healthcare setting beginning as an entry-level supervisor.
3. Successful completion of the degree will allow the student to sit for a number of coding credentials, such as the CCA, CCS, CCS-P, CPC, CPC-H.
4. Successful completion of the degree will allow the student to work in a hospital, clinic, public health facility, insurance company, or related facility.
5. Successful completion of the degree will allow the student to deal with confidential patient information and work in the area of release of information.
6. Successful completion of the degree will allow the student to transfer to a four-year degree program in Health Information Management.
7. Successful completion of the degree will allow the student to further their career path by continuing their education in Tumor Registry.

Accreditation

The Health Information Technology degree program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). Only graduates of a program accredited by CAHIM are eligible to sit for the Registered Health Information Technician (RHIT) exam.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Background Study

Minnesota Law requires that any person who provides services that involve direct contact with patients and residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state. An individual who is disqualified from having direct contact with patients as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate in a clinical placement in a Minnesota licensed health care facility. The College will withdraw any student who is disqualified by the Minnesota Department of Health. The student is responsible for requesting the Commissioner to reconsider the disqualification.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS) in Health Information Technology must earn a grade of "C" or higher in every course in the program.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
*   Minnesota Transfer: (www.mntransfer.org/students/plan/s_ agreements.php?numResults=25&archive=false&from_ inst=70&from_prog=&to_inst=&Search=Search)

*   Anoka Technical College transfer student: (www.anokatech.edu/ BecomeStudent/Transfers.aspx)

Industry Information

The Health Information Management (HIM) professional is an important connection between doctors, patients, insurance providers, and other healthcare professionals within the field. By maintaining, collecting, and analyzing health information, the HIM professional makes an important behind the scenes contribution to the delivery of quality care. Besides working with cutting-edge technology, HIM professionals are experts in the field of patient health information and health records.

Health information technicians ensure the quality of health information by:

*   Verifying health records completeness and accuracy and proper entry into computer systems.

*   Utilizing computer applications to assemble and analyze patient data.

*   Coding diagnoses and procedures for reimbursement and research.

*   Compiling and maintaining registry data.

*   maintaining quality control of health records.

*   Assuring patient privacy and data security.

Wages/Outlook/Advancement

The U.S. Department of Labor Statistics, in its Occupational Outlook Handbook, projects that employment for health information technicians is expected to grow much faster then the average. Credentialed health information technicians (RHITs) can look

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2018-2019
Health Information Technology
Associate of Applied Science (AAS) Degree

forward to many expanding career opportunities due to increasing patient privacy/data security legislation and computerization of health information.

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 45 Credits

☐ HITM 1221   Intro to Health Information Management 3
☐ HITM 1240   CPT Coding 3
☐ HITM 1244   Law and Ethics 2
☐ HITM 1260   Professional Practice for Coding Specialist.........3
☐ HITM 1325   Quality & Performance Improvement in Healthcare 3
☐ HITM 1110   Medical Terminology in Health Information.......3
☐ HITM 1120   HIT Practicum I 3
☐ HITM 1130   ICD-10-CM Coding 3
☐ HITM 1200   Billing and Reimbursement 2
☐ HITM 1210   Supervision of Health Information 3
☐ HITM 1230   ICD-10-PCS Coding...3
☐ HITM 2240   Computerized Health Information 3
☐ HITM 2245   Health Care Statistic and Data Registries............3
☐ HITM 2260   HIT Professional Practice Experience II 2
☐ HLTH 1000   Disease Conditions 2
☐ HLTH 1005   Anatomy & Physiology 4

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:
☐ BIOL 1106   Principles of Biology 4
☐ INTS 1000   Critical Thinking Applications for College 3
☐ English transferable course..3 or 4

Choose ONE transferable course from the two categories below:
☐ SPEECH Choose one transferable course ....3 or 4
OR
☐ PSYCHOLOGY ....3 or 4
Also see: Medical Coding diploma

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Georgina Sampson 763-576-4042
Jody Sandberg 763-576-4066

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	First Semester		Second Semester	
1st YEAR	HITM 1221 3		HITM 1110..........................3	
	HITM 1130 3		HITM 1120 3	
	HITM 1230 3		HITM 1200 2	
	HITM 1244 2		HITM 1240 3	
	HLTH 1000.........................2		HLTH 1005 4	
	INTS 1000 3		**TOTAL 15**	
	TOTAL 16			

	Third Semester		Fourth Semester	
2nd YEAR	HITM 1260 3		HITM 2260.........................2	
	BIOL 1106...........................4		HITM 1210 3	
	Gen Ed/MnTC 8		HITM 1325 3	
	TOTAL 15		HITM 2240..........................3	
			HITM 2245 3	
			TOTAL 14	

ANOKA
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2018-2019
Medical Coding Specialist
Diploma

Technical Requirements 32
General Education/MnTC 9
Total Credits 41

Program Information

The Anoka Technical College Medical Coding Specialist diploma program is a 41-credit program that prepares students to assume an entry-level position as a medical coder in an acute care hospital, clinic or physician's office health care setting.

Program outcomes are designed to assure that graduates of the program will be prepared to demonstrate: essential professional and technical knowledge, skills and competencies fundamental to the medical coding profession; effective written and oral communication skills; skills in using resources and technology; problem solving, teamwork and critical thinking skills.

Accreditation

The Medical Coding Specialist diploma can prepare students to sit for the national certification examination to become a Certified Coding Associate (CCA) or the Certified Procedural Coding-Apprentice (CPC-A) credentials.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Background Study

Minnesota Law requires that any person who provides services that involve direct contact with patients and residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state. An individual who is disqualified from having direct contact with patients as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate in a clinical placement in a Minnesota licensed health care facility. The college will withdraw any student who is disqualified by the Minnesota Department of Health. The student is responsible for requesting the Commissioner to reconsider the disqualification.

Graduation Requirements

All Anoka Technical College students seeking a Diploma in Medical Coding Specialist must earn a grade of "C" or higher in every course in the program.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Graduates of the Medical Coding Specialist diploma program will:

1. Analyze medical record documentation in order to assign diagnostic and procedures codes.
2. Provide important information for the health care reimbursement process.
3. Assist in medical research and statistics.

Medical coding specialists analyze health record documentation in order to assign and/or ensure that valid codes are applied to medical diagnoses and procedures to facilitate reimbursement, analysis of patient outcomes and statistics. The coding specialist must have a thorough understanding of the content of the health record in order to be able to locate information to support or provide specificity for coding.

Therefore, coding specialists receive training in the anatomy and physiology of the human body and disease processes in order to understand the etiology, pathology, symptoms, signs, diagnostic studies, treatment modalities, and prognosis of diseases and procedures to be coded.

Wages/Outlook/Advancement

The U.S. Department of Labor Statistics, in its Occupational Outlook Handbook, projects that employment for health information technicians is expected to grow much faster then the average.

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for Gainful Employment Report

Technical Education: 32 Credits

☐ ADSC 1003	Introduction to Keyboarding & Skillbuilding	......	2
☐ HITM 1221	Intro to Health Information Management	....	3
☐ HITM 1240	CPT Coding	......	3
☐ HITM 1244	Law and Ethics	......	2
☐ HITM 1260	Professional Practice for Coding Specialist	....	3
☐ HITM 1110	Medical Terminology in Health Information	....	3
☐ HITM 1130	ICD-10-CM Coding	....	3
☐ HITM 1200	Billing and Reimbursement	....	2
☐ HITM 1230	ICD-10-PCS Coding	....	3
☐ HITM 1250	Advanced Coding	....	2
☐ HLTH 1000	Disease Conditions	....	2
☐ HLTH 1005	Anatomy and Physiology	....	4

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2018-2019
Medical Coding Specialist
Diploma

General Education/MnTC Requirements: 9 Credits

Nine (9) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:

☐ INTS 1000   Critical Thinking Applications for College 3
☐ Choose six (6) transferable credits from these categories:
☐ English Choose one transferable course..............................3 or 4
☐ SPEECH Choose one transferable course ....3 or 4

Also see: Health Information Technology AAS, Medical Administrative AAS, Medical Administrative diploma, and Medical Scribe certification

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Georgina Sampson 763-576-4042
Jody Sandberg 763-576-4066

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	First Semester		Second Semester	
	HITM 1221	3	HITM 1110	3
	HITM 1130	3	HITM 1200	2
	HITM 1230	3	HITM 1240	3
	HLTH 1000	2	HITM 1244	2
	INTS 1000	3	HLTH 1005	4
	TOTAL	**14**	**TOTAL**	**14**

2nd YEAR	Third Semester			
	ADSC 1003	2		
	HITM 1260	3		
	HITM 1250	2		
	Gen Ed/MnTC	6		
	TOTAL	**13**		

ANOKA
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2018-2019
Health Technology
Certificate

Technical Requirements 19
General Education/MnTC 7
Total Credits 26

Program Information

The Anoka Technical College Health Technology certificate is a 26-credit program that provides students with skills to secure an entry-level position in the health care field (nursing assistant, phlebotomist, and home health aide) or allow students to engage in coursework that will transfer into the different health programs.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Interact in complex environment.
2. Apply critical thinking skills.
3. Communicate in diverse settings.
4. Recognize teamwork/collaboration as an integral part of the health care delivery.
5. Demonstrate professional behavior.
6. Provide safe, patient-centered care.

Course Prerequisites

Some courses may require an Accuplacer score or completing basic math, basic English, and/or reading courses with a "C" or better.

Background Study

Minnesota Law requires that any person who provides services that involve direct contact with patients and residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state. An individual who is disqualified from having direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate in a clinical placement in a Minnesota licensed health care facility. Anoka Tech will withdraw any student from the program who is disqualified by the Minnesota Department of Health. The student is responsible for requesting the Commissioner to reconsider the disqualification.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

According to the Minnesota Department of Education and the Minnesota Department of Employment and Economic Development, people in entry-level health care careers are people who tend to:

- Consider relationships important. They like to work in a friendly, non-competitive environment. They like to do things for other people. They prefer jobs where they are not pressured to do things that go against their sense of right and wrong.
- Consider good working conditions important. They like jobs offering steady employment and good pay. They want employment that fits their individual work style. They may prefer doing a variety of tasks, working alone, or being busy all the time.
- Have social interests. They like work activities that assist others and promote learning and personal development. They like to communicate with others: to teach, give advice, help, or otherwise be of service to others.
- Have realistic interests. They like work activities that include practical, hands-on problems and solutions. They like to work with plants, animals, and physical materials such as wood, tools, and machinery. They often prefer to work outside.

Employers look for entry-level health care personnel who like to help people and do not mind hard work. Employees must be responsible, compassionate, emotionally stable and cheerful. They also need to be tactful, honest, and discreet about patients' private lives.

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 19 Credits

Must complete one of the following courses:
☐ HLTH 1101 TMA- Trained Medication Aide 3
☐ HLTH 1103 Nursing Assistant/Home Health Aide 5
Select from the following to equal nine (9) HLTH credits:
☐ HLTH 1000 Disease Conditions 2
☐ HLTH 1005 Anatomy & Physiology 4
☐ HLTH 1101 TMA- Trained Medication Aide 3
☐ HLTH 1040 Medical Terminology 2
☐ HLTH 1103 Nursing Assistant/Home Health Aide 5
Select ten (10) credits from the following:
☐ ADSC 1055 Electronic Health Records....................................2
☐ BIOL 1106 Principles of Biology 4
☐ BIOL 1130 Human Biology 4
☐ BIOL 2100 Anatomy & Physiology I 4
☐ BIOL 2200 Anatomy & Physiology II 4
☐ COMP 1002 Computer Technologies for Communication 2
☐ EMED 1076 BLS for the Healthcare Provider...........................1
☐ MATH 1010 Dosage Calculations for Health Care Professionals 1
☐ PSYC 1406 General Psychology 4
☐ PSYC 1506 Lifespan Development 4
☐ PSYC 1406 General Psychology 4

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2018-2019
Health Technology
Certificate

General Education/MnTC Requirements: 7 Credits

Seven general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:

☐ ENGL 1107 Composition I 4

    The remaining three credits may be selected from the following:

☐ SPCH 1120　Public Speaking 3
☐ SPCH 1200　Interpersonal Communications 3
☐ SPCH 1500　Intercultural Communications 3

Also see: all programs in Health Science Technology career field

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Cathy Bishop.. 763-576-4009
Teresa Dill.. 763-576-4136

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

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Nursing Assistant/Home Health Aide
Certificate

Total Technical Credits...............5

Program Information

The Anoka Technical College Nursing Assistant/Home Health Aide certificate is a five (5)-credit course that introduces concepts of basic human needs, basic nursing and personal care skills, mental health and social needs, restorative services, resident's rights, and home health. The skills are performed in a supervised laboratory and long term care clinical setting. The course meets the requirements of the federal government and the Minnesota Board of Nursing. Upon completion of the competency evaluation, students can be employed in a long-term care facility, hospital or home health agency.

Course Prerequisites

None.

Background Study

Minnesota Law requires that any person who provides services that involve direct contact with patients and residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state. An individual who is disqualified from having direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate in a clinical placement in a Minnesota licensed health care facility. The college will withdraw any student who is disqualified by the Minnesota Department of Health. The student is responsible for requesting the Commissioner to reconsider the disqualification.

Registration Process

Please register online.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_ agreements.php?numResults=25&archive=false&from_ inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/ BecomeStudent/Transfers.aspx)

Books and Supplies

- Nursing assistant book and skills packet available through the Anoka Technical College bookstore.
- Student photo ID card.
- Black uniforms for the clinical training sites.
- Watch with a second hand and a box of non-latex exam gloves.

Reimbursable Expenses

Note from the Minnesota Department of Health regarding reimbursable expenses: Nursing assistants who pay for the cost of their training and testing prior to employment are eligible for reimbursement. The nursing assistant has one (1) year from completion of the test to turn in receipts requesting reimbursement. The facility has 90 days to reimburse the nursing assistant. If the nursing assistant does not remain employed as a nursing assistant for 90 days, the nursing home is under no obligation to reimburse the nursing assistant. The first nursing home the nursing assistant stays at for at least 90 days would then be responsible to reimburse the nursing assistant if it has been one year or less since completion of the test. Only certified nursing homes or boarding care homes are required to reimburse a nursing assistant.

Industry Information

Upon completion of the competency evaluation, a student can be employed in a long term care facility, hospital, home health agency or assisted living facility.

Technical Education: 5 Credits

☐ HLTH 1103   Nursing Assistant/Home Health Aide..................5
Also see: Health Technology Certificate

Start Dates

Fall Semester...August
Spring Semester ....January
Summer Semester ....May

Faculty Contact

Teresa Dill...763-576-4136

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

ANOKA
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Medical Administrative Specialist
Associate of Applied Science (AAS) Degree

Technical Requirements.............45
General Education/MnTC 15
Total Credits 60

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Medical Administrative Specialist is a 60-credit program that prepares students with the broad range of technical and communications skills needed for success in today's office work environment with specific study in medical terminology, electronic health records software, and office bookkeeping.

Medical office procedures course work includes learning practice management software to include setting patients' appointments, maintaining physicians' calendars, billing and messaging as well as specific interpersonal communications skills necessary in a medical setting. Students gain competence in word processing, spreadsheet, database and presentation software. Keyboarding speed and accuracy is developed while grammar, punctuation and writing skills are polished. Students are well prepared for employment in any medical office environment.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.

1. Exhibit effective interpersonal skills and professional attitudes by demonstrating the ability to communicate with authority figures and peers, follow work rules and expectations appropriately, maintain confidentiality, and recognize an appropriate business appearance.
2. Demonstrate the ability to express thoughts clearly, concisely, and appropriately in verbal and written format by consistently using correct mechanics, grammar, format, and message approach (direct, indirect).
3. Demonstrate the use of critical thinking skills to analyze and solve business problems by demonstrating the ability to define problems, find relevant information, synthesize and evaluate information, and implement decisions.
4. Exhibit technical competency in keyboarding by demonstrating keyboarding skill proficiency of 45 wpm on a five-minute timing for degrees and diplomas and knowledge of correct document formatting.
5. Demonstrate technical competency by utilizing a wide range of software applications necessary for business office operations; demonstrate initiative in learning to use new technology; and apply new technology accurately in office settings.
6. Demonstrate knowledge of roles and functions of various professionals; collaborate and problem-solve as part of the office team.
7. Demonstrate ability to set priorities, organize work, and sequence tasks appropriately, and consistently complete projects on a schedule.
8. Demonstrate the ability to perform mathematical calculations necessary in business applications, including accounting, by working with percentages, decimals, and fractions; understand accounting principles as they are applied to business office bookkeeping; and use formulas for creating spreadsheets and databases.
9. Develop and evaluate customer service skills by ascertaining the characteristics of a customer service organization and using customer service skills in servicing customers professionally.

Admission Requirement

Program Admission Requirements: Students are required to have an Accuplacer reading score of 78 or higher or appropriate test score for admittance to the program. If students do not achieve 78 or higher, they may take ATC READ0960 or ATC READ0900 achieving a C or higher for admittance to the program.

Course Prerequisites

See Credits:

[A] The prerequisite to ADSC1010 Keyboarding I is ADSC1003 Introduction to Keyboarding and Speedbuilding.

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

In this fast-growing health care field, the medical administrative assistant functions in physicians' offices, health clinics, outpatient facilities, medical laboratories, hospitals, health insurance companies, medical supplies and equipment businesses, and pharmaceutical companies. Minnesota Law requires that any person who provides services that involve direct contact with patients and residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state.

Job duties/skills may include the following: transcribing medical documents/reports, composing and processing correspondence, accounting payments and posting charges, coding of diagnoses and procedures, processing insurance claims, coordinating patient care, scheduling patient appointments, recording and relaying messages, maintaining various financial records, maintaining patient files, making calls for physicians and other healthcare personnel, arranging hospital admissions, scheduling surgeries, using automated record system to access, entering and editing patient information, and arranging physicians' meetings and conferences.

Minnesota Law requires that any person who provides services that involve direct contact with patients and residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state.

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2018-2019
Medical Administrative Specialist
Associate of Applied Science (AAS) Degree

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 45 Credits

☐ ADSC 1003   Introduction to Keyboarding and Speedbuilding 2
☐ ADSC 1010   Keyboarding I [A] 3
☐ ADSC 1031   Business English Skills 3
☐ ADSC 1042   Applied Medical Terminology for Scribing 2
☐ ADSC 1045   Administrative Office Procedures 4
☐ ADSC 1054   Office Bookkeeping 4
☐ ADSC 1055   Electronic Health Records 2
☐ ADSC 1142   Integrated Software Applications 4
☐ ADSC 1162   Microsoft PowerPoint 2
☐ ADSC 1171   Microsoft Excel 2
☐ ADSC 1197   Microsoft Word 4
☐ ADSC 1206   Written Business Communications 4
☐ ADSC 1283   Medical Office Procedures 4
☐ ADSC 1451   Technology Tools for the Workplace 3
☐ HLTH 1040   Medical Terminology 2

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:
☐ INTS 1000 Critical Thinking Applications for College 3
☐ Choose 12 transferable credits from THREE different MnTC goal areas

Also see: Medical Coding diploma, Medical Scribe certificate, and Medical Receptionist diploma

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Darla Cullen 763-576-4018
Deb Catlett 763-576-4025

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	First Semester	Second Semester
1st YEAR	ADSC 1003 2	ADSC 1010 3
	ADSC 1031 3	ADSC 1206.........................4
	ADSC 1054 4	ADSC 1451 3
	ADSC 1197 4	HLTH 1040.........................2
		Gen Ed/MnTC 4
	TOTAL 16	**TOTAL 16**

	Third Semester	Fourth Semester
2nd YEAR	ADSC 1045 4	ADSC 1042 2
	ADSC 1055 2	ADSC 1142 4
	ADSC 1162 2	ADSC 1283.........................4
	ADSC 1171 2	Gen Ed/MnTC 4
	Gen Ed/MnTC 4	**TOTAL 14**
	TOTAL 14	

Although the general education courses are listed in the sequence above, the courses may be taken any semester and in any order.

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Medical Receptionist
Diploma

Technical Requirements 42
General Education 3
Total Credits 45

Program Information

The Anoka Technical College Medical Receptionist diploma is a 45-credit program that prepares students with the broad range of technical and communications skills needed for success in today's office work environment with specific study in medical terminology, electronic health records software, and office bookkeeping.

Medical office procedures course work includes learning practice management software to include setting patients' appointments, maintaining physicians' calendars, billing, and messaging as well as specific interpersonal communications skills necessary in a medical setting. Students will gain competence in word processing, spreadsheet, database, and presentation software. Keyboarding speed and accuracy is developed while grammar, punctuation, and writing skills are polished. Students are well prepared for employment in any medical office environment.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.

1. Exhibit effective interpersonal skills and professional attitudes by demonstrating the ability to communicate with authority figures and peers, follow work rules and expectations appropriately, maintain confidentiality, and recognize an appropriate business appearance.
2. Demonstrate the ability to express thoughts clearly, concisely, and appropriately in verbal and written format by consistently using correct mechanics, grammar, format, and message approach (direct, indirect).
3. Demonstrate the use of critical thinking skills to analyze and solve business problems by demonstrating the ability to define problems, find relevant information, synthesize and evaluate information, and implement decisions.
4. Exhibit technical competency in keyboarding by demonstrating keyboarding skill proficiency of 45 wpm on a five-minute timing for degrees and diplomas and knowledge of correct document formatting.
5. Demonstrate technical competency by utilizing a wide range of software applications necessary for business office operations; demonstrate initiative in learning to use new technology; and apply new technology accurately in office settings.
6. Demonstrate knowledge of roles and functions of various professionals; collaborate and problem-solve as part of the office team.
7. Demonstrate ability to set priorities, organize work, and sequence tasks appropriately, and consistently complete projects on a schedule.
8. Demonstrate the ability to perform mathematical calculations necessary in business applications, including accounting, by working with percentages, decimals, and fractions; understand accounting principles as they are applied to business office bookkeeping; and use formulas for creating spreadsheets and databases.
9. Develop and evaluate customer service skills by ascertaining the characteristics of a customer service organization and using customer service skills in servicing customers professionally.

Admission Requirements

Students are required to have an Accuplacer reading score of 78 or higher or appropriate test score for admittance to the program. If students do not achieve 78 or higher, they may take ATC READ0960 or ATC READ0900 achieving a C or higher for admittance to the program.

Course Prerequisites

[A] The prerequisite to ADSC1010 Keyboarding I is ADSC1003 Introduction to Keyboarding and Speedbuilding.

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

In this fast-growing health care field, the medical administrative assistant functions in physicians' offices, health clinics, outpatient facilities, medical laboratories, hospitals, health insurance companies, medical supplies and equipment businesses, and pharmaceutical companies. Minnesota Law requires that any person who provides services that involve direct contact with patients and residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state.
Job duties/skills may include the following: transcribing medical documents/reports, composing and processing correspondence, accounting payments and posting charges, coding of diagnoses and procedures, processing insurance claims, coordinating patient care, scheduling patient appointments, recording and relaying messages, maintaining various financial records, maintaining patient files, making calls for physicians and other healthcare personnel, arranging hospital admissions, scheduling surgeries, using automated record system to access, entering and editing patient information, and arranging physicians' meetings and conferences.

Minnesota Law requires that any person who provides services that involve direct contact with patients and residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state.

2018-2019
Medical Receptionist
Dipolma

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 42 Credits

☐ ADSC 1003   Introduction to Keyboarding and Speedbuilding.....3
☐ ADSC 1010   Keyboarding I [A] 3
☐ ADSC 1031   Business English Skills 3
☐ ADSC 1042   Applied Medical Terminology for Scribing 2
☐ ADSC 1045   Administrative Office Procedures 4
☐ ADSC 1054   Office Bookkeeping 4
☐ ADSC 1055   Electronic Health Records 2
☐ ADSC 1142   Integrated Software Applications 4
☐ ADSC 1162   Microsoft PowerPoint 2
☐ ADSC 1171   Microsoft Excel 2
☐ ADSC 1197   Microsoft Word 4
☐ ADSC 1206   Written Business Communications......................4
☐ ADSC 1283   Medical Office Procedures 4
☐ HLTH 1040   Medical Terminology 2

General Education/MnTC Requirements: 3 Credits

Three (3) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:
☐ INTS 1000 Critical Thinking Applications for College 3
Also see: Medical Administrative Specialist AAS degree, Medical Coding Specialist diploma, and Medical Scribe Specialist certificate

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Darla Cullen 763-576-4018
Deb Catlett 763-576-4025

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	First Semester		Second Semester	
1ˢᵗ YEAR	ADSC 1003	2	ADSC 1010	3
	ADSC 1031	3	ADSC 1042	2
	ADSC 1054	4	ADSC 1206	4
	ADSC 1162	2	ADSC 1283	4
	HLTH 1040	2	**TOTAL**	**13**
	INTS 1000	3		
	TOTAL	**16**		

	Third Semester			
2ⁿᵈ YEAR	ADSC 1045	4		
	ADSC 1055	2		
	ADSC 1142	4		
	ADSC 1171	2		
	ADSC 1197	4		
	TOTAL	**16**		

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Medical Assistant
Associate of Applied Science (AAS) Degree

Technical Requirements 45
General Requirements 15
Total Credits 60

Program Information

The Anoka Technical College Medical Assistant Associate of Applied Science (AAS) degree is a 60-credit program that prepares students to be a professional, multi-skilled medical assistant who is dedicated to assist in patient care management. Graduates are prepared to assist medical providers with examinations and treatments, conduct medical histories, perform Clinical Laboratory Improvement Amendments (CLIA) waived testing, sterilize instruments and supplies, assist with minor surgery, medical office administrative services and administer medications.

Graduates of the Medical Assistant program are eligible to take the Certification Exam of the American Association of Medical Assistants (AAMA).

Upon graduation, students will earn both a diploma and the Associate of Applied Science (AAS) degree. The 15 credits of general education are transferrable for students who wish to continue advanced healthcare education.

Program Learning Outcomes

This profession is the only allied health specifically trained to work in ambulatory health settings. Medical assistants are multi-skilled employees, competent to perform administrative, clinical and laboratory procedures within the supervising physician's scope of practice consistent with medical assisting education, training and experience.

Upon successful completion of program requirements, graduates will be able to:

1. Communicate effectively with patients, family members, and/ or colleagues of diverse sociocultural backgrounds through the use of verbal and non-verbal skills, written communications, technology communications, and active listening within an ambulatory care setting.
2. Demonstrate responsibility within the scope of practice for a medical assistant.
3. Apply administrative policies and procedures effectively.
4. Demonstrate professionalism as a healthcare professional
5. Apply knowledge of medical laboratory techniques to accurately collect specimens, perform (CLIA) waived testing, and communicate laboratory test result to patients.
6. Illustrate a caring and empathic approach while meeting patient's needs across their lifespan and within a diverse community.
7. Perform clinical procedures and medication administration in a medical practice setting while utilizing critical thinking skills.

Program Goals

- Competent perform as entry-level Medical Assistants in cognitive (learning) psychomotor (skills), and affective (behavior) learning domains.
- Continue to provide quality graduates to support the needs of our community and area employers.
- Help students and communities live and learn well.
- Foster an environment of critical thinking, effective communication, personal responsibility and initiative.

Program Externship Requirements

Students entering into the externship must have immunizations such as Hepatitis B, MMR, Varicella and Tdap. Also, must be current in First Aid/BLS CPR through the American Heart Association for Healthcare Providers. See Medical Assistant Handbook or advisor for further information.

Accreditation/Cerification

The Medical Assistant program is nationally accredited by the Commission on Accreditation of Allied Health Programs (CAAHEP): 25400 U.S. Highway 19 North, Ste 158, Clearwater, FL 33763; 727-210-2350; www.caahep.org. Graduates can take the National Certification Examination to become certified with the American Association of Medical Assistants (AAMA).

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a "C" or better.

Background Studies

Minnesota Law requires any person with direct patient and resident contact at a health care facility licensed by the Minnesota Department of Health (MDH) to have a background study conducted by the state. An individual disqualified from direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate in a clinical placement in a Minnesota licensed health care facility. Anoka Technical College will withdraw any student from the Medical Assistant program who is disqualified by the MDH. The student is then responsible for requesting the commissioner to reconsider the disqualification.

Graduation Requirements

Anoka Technical College students seeking an Associate in Applied Science (AAS) or diploma in Medical Assistant must complete all of the required courses as outlined on the program plan with a C or better grade in each course.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Medical Assistant
Associate in Applied Science (AAS) Degree

Industry Information

A medical assistant is eligible to work in clinics, urgent care/express care/minute clinics, blood collection centers, research facilities and insurance companies. Duties could include administering injections, and blood pressure readings, rooming patients, drawing blood, performing commonly ordered laboratory tests and electrocardiograms (EKG), insurance coding, medical records and scheduling patients for special procedures or other medical appointment.

Medical assistants have direct patient contact and work closely with physicians, nurses and other health care professionals. The ability to demonstrate professionalism, communicate effectively, multi-task, and perform procedures quickly and accurately is essential for success.

Advancement typically requires more training and certification. Many medical assistants choose to become nurses or other health care workers through further study. Administrative positions provide another popular career path because an administrative medical assistant can rise to the position of office manager without additional education.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 45 Credits

☐ ADSC 1055 Electronic Health Records 2
☐ EMED 1076 BLS for the Heath Care Provider......................... 1
☐ HLTH 1000 Disease Conditions 2
☐ HLTH 1005 Anatomy and Physiology.................................... 4
☐ HLTH 1040 Medical Terminology... 2
☐ MAST 1200 Medical Assistant Seminar 2
☐ MAST 1300 Medical Administrative I 2
☐ MAST 1400 Pharmacology I... 2
☐ MAST 1500 EKG 1
☐ MAST 1600 Laboratory I 4
☐ MAST 1700 Clinical Procedures I... 3
☐ MAST 2300 Medical Administrative II.................................... 2
☐ MAST 2400 Pharmacology II.. 2
☐ MAST 2600 Laboratory II 4
☐ MAST 2700 Clinical Procedures II 3
☐ MAST 2900 Externship 7
☐ MATH 1020 Math for Health Care 2

Courses with MAST prefix are restricted to students admitted to the Medical Assistant program. All required core coursework must be successfully completed before participating in the externship.

General Education: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:
☐ BIOL 1106 Principles of Biology 4
☐ ENGL 1107 Composition I 4
OR
☐ ENGL 2105 Business and Technical Writing........................... 4
☐ PSYC 1406 General Psychology 4
OR
☐ PSYC 1506 Lifespan Development 4
☐ SPCH 1120 Public Speaking 3
OR
☐ SPCH 1200 Interpersonal Communication 3

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Lisa Sailor 763-576-4084
Stacey Wanovich.. 763-576-4132
Deb Lehew.. 763-576-4026

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester	Spring Semester	Summer Semester
1ˢᵗ YEAR	ENGL 1107/2105 .4 HLTH 1000 ....2 HLTH 1005 ....4 HLTH 1040 ....2 MATH 1020 ....2 SPCH 1120/1200..3 TOTAL...............17	MAST 1200.........2 MAST 1300.........2 MAST 1500.........1 MAST 1600.........4 MAST 1700.........3 MAST 2300.........2 TOTAL...............14	PSYC 1406/1506 .4 ADSC 1055..........2 TOTAL................6
	Fall Semester	**Spring Semester**	
2ⁿᵈ YEAR	BIOL 1106............4 EMED 1076 ....1 MAST 1400..........2 MAST 2400..........2 MAST 2600..........4 MAST 2700..........3 TOTAL...............16	**MAST 2900 .....7 TOTAL 7	

***All required course work must be successfully completed before participating in the externship.**

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Medical Assistant
Diploma

Technical Requirements................45
General Education/MnTC 4
Total Credits 49

Program Information

The Anoka Technical College Medical Assistant diploma is a 49-credit program that prepares students to be a professional, multi-skilled medical assistant who is dedicated to assist in patient care management. Graduates are prepared to assist medical providers with examinations and treatments, conduct medical histories, perform Clinical Laboratory Improvement Amendments (CLIA) waived testing, sterilize instruments and supplies, assist with minor surgery, medical office administrative services and administer medications.

Graduates of the Medical Assistant program are eligible to take the *Certification Exam of the American Association of Medical Assistants (AAMA)*.

Program Learning Outcomes

This profession is the only allied health specifically trained to work in ambulatory health settings. medical assistants are multi-skilled employees, competent to perform administrative, clinical and laboratory procedures within the supervising physician's scope of practice consistent with medical assisting education, training and experience.

Upon successful completion of program requirements, graduates will be able to:
1. Communicate effectively with patients, family members, and/or colleagues of diverse sociocultural backgrounds through the use of verbal and non-verbal skills, written communications, technology communications, and active listening within an ambulatory care setting.
2. Demonstrate responsibility within the scope of practice for a medical assistant.
3. Apply administrative policies and procedures effectively.
4. Demonstrate professionalism as a healthcare professional
5. Apply knowledge of medical laboratory techniques to accurately collect specimens, perform (CLIA) waived testing, and communicate laboratory test result to patients.
6. Illustrate a caring and empathic approach while meeting patient's needs across their lifespan and within a diverse community.
7. Perform clinical procedures and medication administration in a medical practice setting while utilizing critical thinking skills.

Program Goals

- Competent perform as entry-level medical assistants in cognitive (learning) psychomotor (skills), and affective (behavior) learning domains.
- Continue to provide quality graduates to support the needs of our community and area employers.
- Help students and communities live and learn well.
- Foster an environment of critical thinking, effective communication, personal responsibility and initiative

Program Externship Requirements

Students entering into the externship must have immunizations such as Hepatitis B, MMR, Varicella and Tdap. Also, must be current in First Aid/BLS CPR through the American Heart Association for Healthcare Providers. See *Medical Assistant Handbook* or advisor for further information.

Accreditation/Certification

The Medical Assistant program is nationally accredited by the Commission on Accreditation of Allied Health Programs (CAAHEP): 25400 U.S. Highway 19 North, Ste 158, Clearwater, FL 33763; 727-210-2350; www.caahep.org. Graduates can take the National Certification Examination to become certified with the American Association of Medical Assistants (AAMA).

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a "C" or better.

Background Studies

Minnesota Law requires any person with direct patient and resident contact at a health care facility licensed by the Minnesota Department of Health (MDH) to have a background study conducted by the state. An individual disqualified from direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate in a clinical placement in a Minnesota licensed health care facility. Anoka Technical College will withdraw any student from the Medical Assistant program who is disqualified by the MDH. The student is then responsible for requesting the commissioner to reconsider the disqualification.

Graduation Requirements

Anoka Technical College students seeking an Associate in Applied Science (AAS) or Medical Assistant diploma must complete all of the required courses as outlined on the program plan with a C or better grade in each course.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Medical Assistant
Diploma

Industry Information

A medical assistant is eligible to work in clinics, urgent care/express care/minute clinics, blood collection centers, research facilities and insurance companies. Duties could include administering injections, and blood pressure readings, rooming patients, drawing blood, performing commonly ordered laboratory tests and electrocardiograms (EKG), insurance coding, medical records and scheduling patients for special procedures or other medical appointment.

Medical assistants have direct patient contact and work closely with physicians, nurses and other health care professionals. The ability to demonstrate professionalism, communicate effectively, multi-task, and perform procedures quickly and accurately is essential for success. Advancement typically requires more training and certification. Many medical assistants choose to become nurses or other health care workers through further study. Administrative positions provide another popular career path because an administrative medical assistant can rise to the position of office manager without additional education.

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development.

Technical Credits: 45 Credits

☐	ADSC 1055	Electronic Health Records	2
☐	EMED 1076	BLS for Health Care Provider	1
☐	HLTH 1000	Disease Conditions	2
☐	HLTH 1005	Anatomy and Physiology	4
☐	HLTH 1040	Medical Terminology	2
☐	MAST 1200	Medical Assistant Seminar	2
☐	MAST 1300	Medical Administrative I	2
☐	MAST 1400	Pharmacology I	2
☐	MAST 1500	EKG	1
☐	MAST 1600	Laboratory I	4
☐	MAST 1700	Clinical Procedures I	3
☐	MAST 2300	Medical Administrative II	2
☐	MAST 2400	Pharmacology II	2
☐	MAST 2600	Laboratory II	4
☐	MAST 2700	Clinical Procedures II	3
☐	MAST 2900	Externship	7
☐	MATH 1020	Math for Health Care	2

Course with MAST prefix are restricted to students admitted to the Medical Assistant program. All required core coursework must be successfully completed before participating in the externship.

General Education/MnTC Requirements: 4 Credits

☐	ENGL 1107	Composition I	4
OR			
☐	ENGL 2105	Business and Technical Writing	4

Sample Program Sequence
Full Time

	Fall Semester		Spring Semester	
1st YEAR	ENGL 1105 or 2105	4	MAST 1600	4
	HTLH 1005	4	MAST 1700	3
	HLTH 1040	2	MAST 2600	4
	MAST 1200	2	MAST 2700	3
	MAST 1300	2	EMED 1076	1
	MAST 1500	1	**TOTAL**	**15**
	MAST 2300	2		
	MAST 1400	2		
	MAST 2400	2		
	TOTAL	**21**		

	Summer Semester		Fall Semester	
2nd YEAR	ADSC 1055	2	**MAST 2900	7
	HLTH 1000	2	**TOTAL**	**7**
	MATH 1020	2		
	TOTAL	**6**		

***All required course work must be successfully completed before participating in the externship.*

Gainful Employment

Follow this link for a Gainful Employment Report

Start Dates

Fall Semester .... August
Spring Semester .... January

Faculty Contact

Lisa Sailor 763-576-4084
Stacey Wanovich 763-576-4132
Deb LeHew 763-576-4026

For information on how to apply, to schedule a tour, or for service during summer hours, Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Medical Scribe Specialist
Certificate

Program Information

The Anoka Technical College Medical Scribe Specialist certificate is a 30-credit program that prepares students to perform real-time recording of patient-doctor interaction at the point of service and input of other physician-communcated information into the electronic health record while under the constant supervision of the medical provider. This program includes curriculum that teaches the skills required to obtain entry-level employment as a medical scribe, which includes medical terminology, anatomy, electronic health records software, medical records documentation, privacy and ethics standards, diagnosis and procedure coding, and health care reimbursement practices.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.

1. Graduates will demonstrate the ability to accurately and thoroughly document medical visits and procedures as they are being performed by the physician.
2. Graduates will demonstrate proficiency in keyboarding speed and accuracy.
3. Graduates will demonstrate an understanding of medical terminology, anatomy, diagnostic procedures, pharmacology and treatment assessments to the extent required to understand and accurately scribe doctor-patient encounters in real-time.
4. Graduates will demonstrate the ability to translate medical abbreviations into their expanded forms.
5. Graduates will demonstrate the ability to be able to use all functions of the electronic health records software.
6. Graduates will have a thorough knowledge of and understand the significance of complying with the Health Insurance Portability and Accountability Act (HIPPA) when accessing or communicating patient information.
7. Graduates will demonstrate professionalism in all communications.

Admission Requirements

Students are required to have an Accuplacer reading score of 78 or higher or appropriate test score for admittance to the program. If students do not achieve 78 or higher, they may take ATC READ0960 or ATC READ0900 achieving a C or higher for admittance to the program.

Course Prerequisites

Some courses may require appropriate score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Industry Information

The mandatory implementation of the electronic health record has created this specific job in the health care industry. Providing this type of education prepares students for employment at the forefront of the growth and changes that are happening in the health care industry as it adapts to changes cause by technology. Scribes free up the physicians' time from clerical entry into the electronic health record which increases their productivity. The physician's increase in productivity then increases revenue for the hospital/clinic/practice. From the quality of life perspective, scribes allow physicians to focus on quality patient care instead of the demands of paperwork, documentation and record keeping. This is a STEM career.

Gainful Employment

Follow this link for Gainful Employment Report.

Technical Education: 30 Credits

☐ ADSC 1003	Introduction to Keyboarding and Speedbuilding	2
☐ ADSC 1025	Keyboarding Skillbuilding	2
☐ ADSC 1042	Applied Medical Terminology for Scribing	2
☐ ADSC 1055	Electronic Health Records	2
☐ ADSC 1283	Medical Office Procedures	4
☐ HITM 1030	Medical Coding for Scribing	3
☐ HITM 1110	Medical Terminology in Health Information	3
☐ HITM 1200	Billing and Reimbursement	2
☐ HITM 1210	Supervision of Health Information	3
☐ HITM 1221	Intro to Health Information Management	3
☐ HITM 1244	Law and Ethics	2
☐ HLTH 1050	Body Structures	2

Also see: Health Information Technology (HIT) AAS, Medical Coding Specialist diploma, Medical Administrative Specialist AAS, and Medical Receptionist diploma

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

(continued)

Medical Scribe Specialist
Certificate

Start Dates

Fall Semester..August
Spring Semester ....January

Faculty Contact

Darla_Cullen.. 763-576-4018

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester		Spring Semester	
1st YEAR	ADSC 1003	2	ADSC 1025	2
	ADSC 1055	2	ADSC 1042	2
	HITM 1110	3	ADSC 1283	2
	HITM 1030	3	HITM 1200	4
	HLTH 1050	2	HITM 1210	3
	HITM 1221	3	HITM 1244	2
	TOTAL	**15**	**TOTAL**	**15**

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Practical Nursing
Diploma

Technical Requirements 34
General Education/MnTC 4
Total Credits 38

Program Information

The Anoka Technical College Practical Nursing (PN) diploma is a 38-credit, full-time, two semester program. Through Minnesota Board of Nursing approved program of study, the Practical Nursing program prepares students for a diploma in Practical Nursing. Graduates are educationally eligible to take the National Council Licensure Exam for Practical Nurses (NCLEX-PN) and, after passing and obtaining state licensure, may use the title Licensed Practical Nurse.

End-of-Program Student Learning Outcomes

Consistent with the standards that define nursing practice, the outcomes of the Anoka Technical College program of learning is a graduate who is able to:

- Adhere to professional standards of practice within safe, legal, ethical and regulatory frameworks of the practical nurse (Professional concepts: Safety, Professional Identity and Behavior)
- Communicate effectively to deliver coordinated, interprofessional care through teamwork and collaboration (Professional concepts: Teamwork and Collaboration)
- Utilize holistic information to provide evidence-based patient care that contributes to continuously improving care processes (Professional concepts: Evidence-based Care, Quality Improvement)
- Demonstrate a caring and empathic approach while providing for individual patients' needs across the lifespan and health/illness continuum within a diverse community (Professional concept: Patient Relationship-centered Care)
- Participate in supporting patient care through the utilization of information technology within the practical nurse scope of practice (Professional concept: Informatics)

Accreditation

The Anoka Technical College Practical Nursing (PN) program is approved by the Minnesota Board of Nursing and is specifically designed to train graduates for the specialized field of Licensed Practical Nursing (LPN).

This nursing education program is candidate for accreditation by the Accreditation Commission for Education in Nursing (ACEN). 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia, 30326 www.acenursing.org

Admission Requirements

All required documentation must be submitted in person; Enrollment Services will be unable to receive them via mail, online or fax. Practical Nursing applications are reviewed at the time they are submitted for completeness. When all admission guidelines are satisfied, the applicant is accepted on a space available basis for the following semester.
- Apply to Anoka Technical College and be admitted to the college
- Complete the Nursing Assistant or Medical Assistant requirement
- Complete the CPR requirement
- Complete the Accuplacer Assessments and the Test of Essential Academic Skills (TEAS V or ATI TEAS). See Admission Guide-

lines under the links on the Practical Nursing webpage
- Complete the *Student Record of Immunization document* found under *Forms* on the Practical Nursing website
- Submit the Practical Nursing program *Application* (found under *Forms*) with documentation of each the above

Background Study

State law requires any person who provides services that involve direct contact with patients and/or residents at a health care facility have a background study conducted the Minnesota Department of Human Services (DHS). A student who is disqualified as a result of a background check will not be allowed to enter the program major. A student must receive a "Background Study Clearance" within 90 days preceding the start of clinical or fieldwork courses to be placed at a partnering facility. Any student failing to receive clearance will be disqualified from enrollment in the course. Arrests, charges, or convictions of criminal offenses may cause a student to fail a background study. A disqualified student has the right to request reconsideration of the disqualification. It is the responsibility of the student to request consideration to the Minnesota Department of Health Commissioner if he or she chooses to do so. An applicant is considered to be disqualified while in the reconsideration process.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher. Refer to the Anoka Technical College *Student Handbook* and *College Policy 2.4*.
Additionally:
1. Complete all of the required courses as outlined on the program plan with a C or better grade in each course and an A in MATH 1010.
2. Maintain current CPR certification.
3. Complete NCLEX-Practical Nursing success predictor test.
4. Maintain an acceptable background check from the Minnesota Department of Human Services.
5. Submit an application for graduation to Records/Registration.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Licensed practical nurses (LPNs) specialize in delivering skilled delegated nursing care to individual patients/client across the lifespan in all stages of wellness or illness at the direction of qualified healthcare providers. LPNs care for diverse adult and pediatric patients within an established plan of care and participate as a member of the healthcare team.

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Practical Nursing
Diploma

LPNs enjoy employment opportunities in a variety of health care settings, including clinics, long term care and transitional care centers, assisted living, home care, schools, hospitals, and group homes.

The LPN is a dynamic, vital member of the healthcare team and is legally responsible to practice practical nursing within the Minnesota Nurse Practice Act and the Minnesota Board of Nursing Rules.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for Gainful Employment Report.

Technical Education: 34 Credits

☐ HLTH 1005　Anatomy & Physiology 4
☐ MATH 1010　Dosage Calculations for Health Care Professionals 1
☐ NURS 1400　Foundations of Nursing 3
☐ NURS 1405　Nursing Interventions I: Lab................................ 2
☐ NURS 1410　Health Promotion Across the Lifespan I 4
☐ NURS 1420　Clinical Application I.. 2
☐ NURS 1430　Psychosocial Nursing 2
☐ NURS 1440　Nursing Perspectives on Aging............................ 1
☐ NURS 1500　Transition to Nursing Practice 2
☐ NURS 1511　Health Promotion Across the Lifespan II 4
☐ NURS 1515　Nursing Interventions II: Lab 2
☐ NURS 1521　Clinical Application II 6
☐ NURS 1541　Maternal-Child Nursing 2

General Education/MnTC Requirements: 4 Credits

Four (4) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:
☐ ENGL 1107　Composition I 4

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Christina Wilson, Practical Nursing Director 763-576-4013

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	First Semester		Second Semester	
1st YEAR	*HLTH 1005 4		**ENGL 1107 4	
	*MATH 1010 1		NURS 1500........................ 2	
	NURS 1400........................ 3		NURS 1511 4	
	NURS 1405........................ 2		NURS 1515 2	
	NURS 1410........................ 4		NURS 1521 6	
	NURS 1420........................ 2		NURS 1541 2	
	NURS 1430........................ 1		**TOTAL 18**	
	NURS 1440........................ 1			
	TOTAL 18			

*May be completed before acceptance into Practical Nursing major
**ENGL 1107 may be taken first or second semester or before acceptance.*

ANOKA
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Occupational Therapy Assistant

Associate of Applied Science (AAS) Degree

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Occupational Therapy Assistant is a 71-credit program. Course work includes a combination of general education courses, occupational therapy theory and skill building courses, and on-the-job experiences at various fieldwork sites. Students must provide their own transportation to and from the fieldwork sites. All academic coursework must be completed before students are placed on their Level II fieldwork experience. The Level II fieldwork must be completed within 12 months of completing the required coursework. Enrollment in the fieldwork classes may be limited due to the availability of fieldwork sites.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.

1. Practice using innovative and evidence-based interventions within the role of the entry-level Occupational Therapy Assistant.
2. Demonstrate professional attributes, ethical standards, and values of the profession.
3. Deliver competent services/outcomes by using reflection, strengths, client centered and occupation based interventions, and critical and creative thinking.
4. Collaborate inter/intra professionally.
5. Work with people from diverse backgrounds in a variety of practice settings serving the community.
6. Recognize the importance of life-long learning and professional socialization.

Accreditation/Certification

The Occupational Therapy Assistant program at Anoka Technical College is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA),located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449, ACOTE's phone number, C/O AOTA, is 301-652-AOTA, and its web address is www.acoteonline.org.

Graduates of the program are eligible to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of the exam, the individual is a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice. However, state licenses are usually based on the results of the NBCOT Certification Examination. A felony conviction may affect a graduate's ability to sit for the NBCOT certification exam or attain state licensure.

Admission Requirements

All required documentation must be submitted in person; Enrollment Services will be unable to receive them via mail, online or fax.
Admission criteria:
Option 1
1. Apply to Anoka Technical College and be admitted to the college

2. Complete appropriate test scores and the Test of Essential Academic Skills for Allied Heath (ATI-TEAS).
3. Certificate of Attendance from Information Session

Option 2: Students who have bachelor's or master's degree
1. Apply to Anoka Technical College and be admitted to the college
2. Submit an official transcript of Bachelor's or Master's degree
3. Certificate of Attendance from Information Session

Background Study

Minnesota state law requires that any person who provides services that involve direct contact with patients and/or residents at a health care facility have a background study conducted by the state. A student who is disqualified as a result of a background check will not be allowed to enter the program major. A student must receive a "Background Study Clearance" within 90 days preceding the start of clinical or fieldwork courses to be placed at a partnering facility. Any student failing to receive clearance will be disqualified from enrollment in the course. Arrests, charges, or convictions of criminal offenses may cause a student to fail a background study. If a student is disqualified, the student has the right to request reconsideration of the disqualification.

Graduation Requirements

Successful completion of the Occupational Therapy Assistant program with a grade of C or higher in each of the following: HLTH 1005, and each COTA course and 2.0 average or greater in required PSYC, SPCH and ENGL courses.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Young or old, we all have a job to do – the job of living. Learning, growing, playing, working, managing our homes, and caring for our families and ourselves are among the occupations of life.

Sometimes physical, emotional, or other challenges prevent people from participating fully in the job of living. Stroke, injury, depression, and developmental disabilities, for example, can make it difficult for people to do everyday tasks or be as active and as independent as they'd like. Occupational therapy – a vibrant, growing profession – makes it possible for people to regain independence and to enjoy life to its fullest. By choosing a career in occupational therapy, you will make a difference. You will improve the lives of children, young people, and adults alike. Occupational therapy assistants work with the supervision of registered occupational therapists to provide hands-on services to children and adults who are learning new ways to succeed in the occupations of life.

ANOKA TECHNICAL COLLEGE
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Occupational Therapy Assistant
Associate of Applied Science (AAS) Degree

Students today can look forward to dynamic careers working in varied settings with people of all ages. Many practitioners help children thrive in the "occupations" of childhood learning, playing, and growing. Some work in schools with students who have learning disabilities or behavioral problems. Others work with children who have cerebral palsy, Down Syndrome, and other disabilities.

Practitioners also work with individuals in their homes, community centers, rehabilitation hospitals, and nursing homes. In these settings, they may support people with traumatic injuries, strokes, Alzheimer's disease, or mental health problems.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Occupational therapy assistants may become occupational therapists. Assistants must get a master's degree to become a therapist.

Technical Education: 56 Credits

☐ COTA 1001   Introduction to Occupational Therapy 4
☐ COTA 1050   Clinical Conditions 4
☐ COTA 1105   Therapeutic Applications I...................3
☐ COTA 1155   Therapeutic Applications II 2
☐ COTA 1260   Performance Skills and Applications...................3
☐ COTA 1270   Productive Aging/Geriatric Practice 4
☐ COTA 1280   Mental Health and Wellness 4
☐ COTA 1290   Level I Fieldwork Behavioral..............................1
☐ COTA 2310   Professional Seminar 2
☐ COTA 2330   Physical Rehabilitation Practice 4
☐ COTA 2340   Children and Youth Practice 4
☐ COTA 2350   Community Practice 4
☐ COTA 2390   Level I Fieldwork Traditional.....................................1
☐ COTA 2411   Level II Fieldwork Rotation A............................6
☐ COTA 2421   Level II Fieldwork Rotation B............................6
☐ HLTH 1005   Anatomy and Physiology....................................4

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:
☐ ENGL 1107   Composition I 4
   OR
☐ ENGL 2105   Business and Technical Writing..........................4
☐ PSYC 1406   General Psychology 4
☐ PSYC 1506   Lifespan Development......................................4
☐ SPCH 1500   Intercultural Communication...............................3

Start Dates

Fall Semester...August

Sample Program Sequence
Full Time

	Fall Semester	Spring Semester	Summer Semester
1st YEAR	COTA 1001 ....4 COTA 1050 ....4 COTA 1105 ....3 HLTH 1005 ....4 TOTAL 15	COTA 1155 ....2 COTA 1260...........3 COTA 1270...........4 COTA 1280...........4 COTA 1290...........1 PSYC 1406...........4 TOTAL 18	ENGL 1107 ....4 *OR* ENGL 2105 PSYC 1506...........4 SPCH 1500 ....3 TOTAL 11

	Fall Semester	Spring Semester	
2nd YEAR	COTA 2310 ....2 COTA 2330...........4 COTA 2340...........4 COTA 2350...........4 COTA 2390...........1 TOTAL 15	COTA 2411 ....6 COTA 2421 ....6 TOTAL 12	

Faculty Contact

Julie Grivna..763-576-4262
Barbara Kloetzke 763-576-4017

For more information about the Occupational Therapy program you can contact the Advisor's or you can email questions to FutureOTAStudents@anokatech.edu

ANOKA
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2018-2019
Surgical Technology
Associate of Applied Science (AAS) Degree

Technical Requirements 41
General Education/MnTC 19
Total Credits 60

Program Information

The Anoka Technical College Surgical Technology Associate of Applied Science (AAS) degree is a 60-credit program designed to develop skills in all phases of operating room procedures and techniques, including clinical experience in the operating room.

In addition to operating room techniques, surgical procedures, surgical instruments and equipment, students study surgical microbiology, surgical pharmacology, medical terminology, anatomy and physiology, asepsis (sterile technique), preparation of the patient for surgery, and the physical conditions that make it necessary for a person to have surgery.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Accept constructive criticism and demonstrate the appropriate behavior change.
2. Communicate effectively in medical language.
3. Ability to transfer theoretical knowledge to clinical situations.
4. Adjust to changes in technology.
5. Understand his/her role and function as a member of the surgical team.
6. Display professional behavior.
7. Demonstrate the principles of aseptic technique consistently.
8. Adhere to program/hospital policies and procedures according to industry standards.

Accreditation/Certification

The Anoka Technical College Surgical Technology program is nationally accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Graduates will take the National Certification Examination for Surgical Technologists: CAAHEP, 25400 U.S. Highway 19 N, Ste 158, Clearwater, FL 33763, www.caahep.org

Admission Requirements

Evidence of immunization or a positive Rubella Titer. Students are strongly encouraged to take the Hepatitis B vaccine.

Steps for the application process for Surgical Technology AAS:
1. Successful completion of the Sterile Processing certificate
2. TEAS for Allied Health programs with a minimum score of 60%
3. CPR for the Healthcare Provider

Second year courses are restricted to students admitted to the Surgical Technology program. A medical exam is REQUIRED.

Course Prerequisites

A background in general math, anatomy/physiology, biology, health and life sciences, medical terminology and nursing assistant skills can be helpful.

Background Study

Minnesota law requires any person with direct patient and resident contact at a health care facility licensed by the Minnesota Department of Health (MDH) to have a background study conducted by the state. An individual disqualified from direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not per permitted to participate in a clinical placement in Minnesota licensed health care facility. The student is then responsible for requesting the commissioner to reconsider the disqualification.

Clinical

Clinical hospitals are located in the Twin Cities metropolitan area. Students must provide their own transportation to and from these assigned clinical sites and pay for any parking fees.

Graduation Requirements

1. Successful completion of the Sterile Processing certification with a grade of B or higher in all required Biology courses and a grade of C or higher in the remaining required courses.

2. Successful completion of the second year Surgical Technology courses with a grade of C or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Surgical technologists function mainly as a scrub person in a hospital operating room. The technologist sets up the instruments, drapes, sutures, and supplies for surgical procedures, assists the surgeon and other operating team members with gowning and gloving for surgery, and hands instruments, sutures and supplies to the surgeon throughout the operative procedure.

Surgical technologists work closely with surgeons and registered nurses, are able to anticipate the needs of the physician during surgery, and assist in the care of the patient during surgical procedures.

ANOKA TECHNICAL COLLEGE
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Surgical Technology
Associate of Applied Science (AAS) Degree

Wages/Outlook/Advancement Opportunities

Surgical Technology program graduates are qualified to work in hospital operating rooms, day surgery units, OB labor and delivery, cardiovascular labs, and research labs. Overtime and call time will vary with position and place of employment.

With additional training, some technologists advance to first assistants, who help retract, sponge, and suture during surgery. They also help close and treat wounds.

Some technologists manage supply departments in hospitals. Others take jobs with insurance companies, supply services, or medical equipment companies.

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 41 Credits

☐ Completion of the Sterile Processing Technical Credits 9
☐ *SURG 1010 Surgical Pharmacology 2
☐ *SURG 1026 Operating Room Theory 2
☐ *SURG 1027 Operating Room Techniques 4
☐ *SURG 1035 Operating Room Procedures I 4
☐ **SURG 1037 Operating Room Procedures II 4
☐ **SURG 2000 Operating Room Clinical 16

* These courses must be completed prior to enrolling in SURG 2000.
**SURG 1037 and SURG 2000 must be taken concurrently

General Education/MnTC Requirements: 19 Credits

Nineteen (19) general education credits of Minnesota Transfer Curriculum (MnTC) are required. **This requirement is met upon completion of the Sterile Processing certificate.**

Also see: Sterile Processing certificate

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Rita Schutz...763-576-4123
Becky Driscoll... 763-576-4119

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	First Semester		Second Semester	
	*BIOL 1106......................4		BIOL 2100.........................4	
	COMP 1002 2		HLTH 1040........................2	
	**TOTAL 6		PSYC 1406/1506/1606........4	
			**TOTAL 12	
	Third Semester			
	SPCH 1200/1120/1500........3		SURG 1005.......................2	
	BIOL 2200 4		**TOTAL 12	
	SURG 1003 3			

2nd YEAR	Fourth Semester	Fifth Semester
	SURG 1010 2	SURG 1037 4
	SURG 1026 2	SURG 2000......................16
	SURG 1027 4	**TOTAL 20**
	SURG 1035 4	
	TOTAL 12	

*BIOL 1106 is a prerequisite for BIOL 2100.
** First year courses are completed during the Sterile Processing certificate.*

ANOKA
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2018-2019
Sterile Processing
Certificate

Technical Requirements 9
General Education/MntC 19
Total Credits 28

Program Information

The Anoka Technical College Sterile Processing certificate is a 28-credit program that prepares graduates to work in medical facilities that prepare surgical instruments, supplies and equipment necessary for healthcare. This program includes a broad introduction to health sciences, as well as medical language, communication and computers. The program curriculum includes decontamination, preparation, packaging, sterilization, and sterile storage.

The Sterile Processing certificate is a prerequisite to the Surgical Technology Associate of Applied Science (AAS) degree. Please see Surgical Technology AAS for more information.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Prepared for entry-level employment in a sterile processing position.
2. Eligible to take the certification examination following 400 hours of professional employment.
3. Eligible to apply to the AAS Surgical Technology program

Course Prerequisites

BIOL 1106 Principles of Biology is a prerequisite to BIOL 2100 Anatomy & Physiology I.

BIOL 1106 Principles of Biology requires a Reading score of 78 or higher on the Accuplacer, or approprate test score, or completion of READ 0900 or READ 0960.

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

Successful completion of the Sterile Processing certification with a grade of "B" or higher in all required Biology courses and a grade of "C" or higher in the remaining required courses.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

The work environment is dynamic and fast-paced. The work is challenging, highly technical, and complex. The performance of this vital department has a major impact on the smooth operation of the many departments to which it provides products and services. Employment opportunities may be within hospitals, outpatient centers, and instrument processing centers.

Wage/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for Gainful Employment Report.

Technical Education: 9 Credits

☐ COMP 1002	Computer Technologies for Communication	2
☐ HLTH 1040	Medical Terminology	2
☐ SURG 1003	Sterile Processing	3
☐ SURG 1005	Surgical Microbiology	2

General Education/MnTC Requirements: 19 Credits

Nineteen (19) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:

☐ BIOL 1106	Principles of Biology	4
☐ BIOL 2100	Anatomy & Physiology I	4
☐ BIOL 2200	Anatomy & Physiology II	4
☐ PSYC 1406	General Psychology	4
OR		
☐ PSYC 1506	Lifespan Development	4
OR		
☐ PSYC 1606	Abnormal Psychology	4
☐ SPCH 1200	Interpersonal Communication	3
OR		
☐ SPCH 1120	Public Speaking	3
OR		
☐ SPCH 1500	Intercultural Communication	3

Also see: Surgical Technology AAS

Start Dates

Fall Semester .... August
Spring Semester .... January

Faculty Contact

Rita Schutz 763-576-4123
Becky Driscoll 763-576-4119

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

ANOKA TECHNICAL COLLEGE
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2018-2019
Sterile Processing
Certificate

Sample Program Sequence
Full Time

1st YEAR

First Semester	
BIOL 1106	4
COMP 1002	2
TOTAL	**6**

Second Semester	
*BIOL 2100	4
HLTH 1040	2
PSYC 1406/1506/1606	4
TOTAL	**10**

Third Semester	
BIOL 2200	4
SPCH 1200/1120/1500	3
SURG 1003	3
SURG 1005	2
TOTAL	**12**

BIOL 1106 is a prerequisite for BIOL 2100.

ANOKA TECHNICAL COLLEGE
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Human Services

Community Social Services
Associate of Applied Science (AAS) Degree

Program Information

The Anoka Technical College Community Social Services Associate of Applied Science (AAS) degree is a 60-credit program designed to prepare students to become direct service providers or designated coordinators in settings where vulnerable or at-risk people are housed or treated. Direct service providers are the caregivers in these settings, and the designated coordinators oversee the daily activities of the setting.

The program exposes students to the laws, rules, and regulations surrounding the care and treatment of vulnerable people, specifically developmentally and cognitively disabled people. Additionally, the program trains students how to best support developmentally disabled people, as well as to understand the psychological characteristics of and treatments for various developmental and cognitive disabilities.

Additionally, program coursework also helps define the roles of the direct service provider, designated coordinator and social worker as advocates and resource providers, helping vulnerable clients and residents receive care and services. Coursework in social work and social services, and the broad base of sociology and psychology classes taken as part of this program, will prove valuable for those students who wish to transfer to a four-year institution to potentially major in human services, psychology, social work or sociology

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Students apply skills in a meaningful way (Demonstrating higher level thinking-analysis evaluation, and synthesis)
2. Performance assessment allows for evaluation of attitudes/dispositions.
3. Student develop and create original responses to the topic.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Background Study

Minnesota Law requires that any person who provides services that involve direct contact with patients and/or residents at a health care facility licensed by the Minnesota Department of Health have a background study conducted by the state. An individual who is disqualified from having direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate at a clinical site. The student has the right to request reconsideration of the disqualification.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Students graduating from the Community Social Service (CSS) AAS degree program are eligible for positions in several areas in the health, human services and education fields with children, adolescents, adults and senior citizens. The graduating student may serve a variety of at-risk populations including people with disabilities, mental illness, substance abuse, poverty and disadvantaged.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 36 Credits

- ☐ CSS 1010 Direct Support Professionalism 3
- ☐ CSS 1020 Physical Developmental Supports I 3
- ☐ CSS 1030 Person Centered Planning 3
- ☐ CSS 1040 Facilitating Positive Behaviors 3
- ☐ CSS 1550 Social Services Projects 3
- ☐ CSS 1560 Social Welfare Services 3
- ☐ CSS 1570 Introduction to Social Work 3
- ☐ CSS 2020 Physical Developmental Supports II 3
- ☐ CSS 2050 Supportive Interventions 4
- ☐ CSS 2100 Internship 4
- ☐ HLTH 1000 Disease Conditions 2
- ☐ HLTH 1040 Medical Terminology 2

General Education/MnTC Requirements: 24 Credits

Twenty four (24) general education credits must be taken from the Minnesota Transfer Curriculum (MnTC). Student is required to take:
- ☐ BIOL 1106 Principles of Biology 4
- ☐ ENGL 1107 English Composition 4
- ☐ PSYC 1406 General Psychology 4
- ☐ PSYC 1606 Abnormal Psychology 4
- ☐ SOSC 1010 Introduction to Sociology 3
- ☐ SPCH 1200 Interpersonal Communications 3
  OR
- ☐ SPCH 1500 Intercultural Communications 3
- ☐ Select TWO credits from a MnTC goal area 2

Start Dates

Fall Semester .... August
Spring Semester .... January

ANOKA TECHNICAL COLLEGE
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Community Social Services

Associate of Applied Science (AAS) Degree

Faculty Contact

[Zakia Robbins](.)... 763-576-4182

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or [EnrollmentServices@anokatech.edu](.)

Sample Program Sequence
Full Time

	Fall Semester	Spring Semester
1ST YEAR	CSS 1010 3	CSS 1020 3
	CSS 1040 3	CSS 1030............................. 3
	ENGL 1107 4	CSS 1570............................. 3
	PSYC 1406.......................... 4	HLTH 1040......................... 2
	SPCH 1200/1500 3	SOSC 1010 3
	TOTAL 17	**TOTAL 14**
	Fall Semester	**Spring Semester**
2ND YEAR	CSS 1550............................. 3	CSS 2020 3
	CSS 1560 3	CSS 2100............................. 4
	CSS 2050 4	PSYC 1606.......................... 4
	BIOL 1106........................... 4	Gen Ed/MnTC 2
	HLTH 1000.......................... 2	**TOTAL 13**
	TOTAL 16	

ANOKA
TECHNICAL COLLEGE
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2018-2019
Judicial Reporting
Associate of Applied Science (AAS) Degree

Technical Requirements 53
General Education/MnTC 15
Total Credits 68

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Judicial Reporting is a 68-credit program designed to get graduates working as soon as possible. The academics are designed to be completed in two years. The speed requirement may be completed in two years or may take additional time. Coursework includes English, Legal and Medical Terminology, Business Law, Computer Technology and Machine Shorthand Theory.

Students learn a conflict-free realtime theory that enables them to write efficiently on a realtime system starting in the first semester. Students learn theory in their first year of classes, then work to increase their speed and accuracy until they can capture literary material at 180 wpm, Jury Charge material at 200 wpm, and question-and-answer material at 225 wpm. Summer sessions are mandatory for Judicial Reporting students.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Students will demonstrate the ability to write a realtime theory.
2. Students will be able to demonstrate competency in court reporting technology, including the use of customized computer-aided software.
3. Students will be able to write two-voice at 225 wpm with 97% accuracy; jury charge at 200 wpm with 97% accuracy; and literary at 180 wpm with 97% accuracy.
4. Students will demonstrate knowledge of business and professional ethics that are essential to success.
5. Students will participate in an internship consisting of 40 hours of actual writing time with a professional reporter and/or captioner. Student will demonstrate entry-level industry proficiency by producing a 40-page manuscript.

Course Prerequisites

* The prerequisite for JRBC 1005 is ADSC 1003 Introduction to Keyboarding and Speedbuilding or successful test out at 25 wpm or more.

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Accreditation/Certification

The Judicial Reporting curriculum was created to meet or exceed National Court Reporters Association (NCRA) standards set out by the Council on Approved Student Education (CASE).

The Judicial Reporting/Broadcast Captioning/CART programs are approved by NCRA. Upon graduation, students will be ready to take the NCRA's Registered Professional Reporter (RPR) certification exam. The RPR exam is offered twice per year in April and November.

Program Essentials

Laptop, steno machine, Eclipse student software. Please see instructor for specific requirements before purchasing any equipment. See Tuition and Fees for more information.

Graduation Requirements

Students must earn a grade of "B" or better in all speedbuidling classes and a grade of "C" or better in all other coursework in order to graduate. In addition, students shall pass three five-minute speed tests with 97% accuracy at the following speeds: 225 wpm testimony (two-voice), 200 wpm jury charage, and 180 wpm literary.

The student shall successfully complete an internship with no less than 40 hours of verified actual writing time.

Upon graduation, students will be ready to take the NCRA's Registered Professional Reporter (RPR) certification exam. The RPR exam is offered twice per year, in April and November.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Judicial Reporters can work in courtrooms as official reporters, creating accurate verbatim written records of all the proceedings. Official reporters are employed by the State. Deposition reporting (also known as freelance reporting) is a popular field because it is interesting and allows for flexible scheduling. Freelance reporters typically work on an independent contractor basis taking depositions at law offices.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 53 Credits

☐ ADSC 1006 Business Law 4
☐ HLTH 1040 Medical Terminology 2
☐ JRBC 1000 Realtime Reporting Orientation 1
☐ JRBC 1005 Realtime Reporting I* 4
☐ JRBC 1031 Foundations of Law 3
☐ JRBC 1105 Realtime Reporting II* 4
☐ JRBC 1120 Realtime Reporting Technology 3
☐ JRBC 1200 Realtime Reporting III* 4
☐ JRBC 2000 Realtime Reporting IV* 4

Judicial Reporting

Associate of Applied Science (AAS) Degree

☐ JRBC 2011 Transcription & English I 3
☐ JRBC 2016 Transcription & English II 3
☐ JRBC 2030 Judicial Reporting Procedures 3
☐ JRBC 2036 Word Enrichment 3
☐ JRBC 2040 Business Success for Realtime Careers 2
☐ JRBC 2100 Realtime Reporting V* 4
☐ JRBC 2120 Realtime Reporting VI* 4
☐ JRBC 2140 Judicial Reporting Internship 2

Students must complete the Realtime Reporting classes in sequence Additional speedbuilding courses available upon instructor approval.

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:

☐ General Education/MnTC Courses.. 15

Also see: Broadcast Captioning/CART certificate and Scoping/Proofreading certificate

Start Dates

Fall Semester...August

Summer session is mandatory for Judicial Reporting students.

Faculty Contact

Jennifer Sati, RMR, CRR, CBC, CRI.............................. 763-576-4064

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester	Spring Semester	Summer Semester
1ST YEAR	ADSC 1006..........4 JRBC 1000 ....1 JRBC 1005 ....4 JRBC 1031 ....3 TOTAL...............12	JRBC 1105 ....4 JRBC 1120 ....3 JRBC 1200 ....4 JRBC 2011 ....3 TOTAL...............14	See Advisor
2ND YEAR	HLTH 1040 ....2 JRBC 2000 ....4 JRBC 2016 ....3 JRBC 2030 ....3 JRBC 2040 ....2 TOTAL 14	JRBC 2036...........3 JRBC 2100 ....4 JRBC 2120 ....4 JRBC 2140...........2 TOTAL 13	See Advisor

Note: Sequence does NOT include General Education/MnTC requirements.

ANOKA TECHNICAL COLLEGE
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Program Information

The Anoka Technical College Broadcast Captioning/CART (Communications Access Realtime Translation) certificate is a 16-credit program. The program consists of a core of machine shorthand speedbuilding courses, Realtime/Captioning/CART technology courses and courses to help students become familiar with the deaf community. Students use student versions of software used in industry for realtime translation and the actual equipment/software required to caption. The central objective of the Broadcast Captioning/CART program is to train students to write conflict-free machine shorthand on a computer-compatible stenotype machine, utilizing the industry standard computer-assisted realtime translation at 97 percent accuracy.

NOTE: This certificate is offered through the Judicial Reporting/ Broadcast Captioning program.

Admission Requirements

Students registering for this certificate need to have already completed the Judicial Reporting Associate of Applied Science (AAS) or be working in the reporting field and want to retrain to work in the Captioning/CART industries.

Accreditation/Certification

The Judicial Reporting curriculum was created to meet or exceed National Court Reporters Association (NCRA) standards set by the Council on Approved Student Education (CASE). The Judicial Reporting/Broadcast Captioning/CART programs are approved by NCRA.

Upon graduation, students are ready to take the NCRA's Certified Broadcast Captioner (CBC) and/or Certified CART Provider (CCP) certification exams. Exams are offered twice per year in November and April.

Program Essentials

Laptop, steno machine, Eclipse student software or professional software. Please see instructor for specific requirements before purchasing any equipment. Also see *Tuition and Fees* for more information.

Graduation Requirements

Students must earn a grade of "B" or better in the Broadcast Captioning and CART Practicum and Realtime Principles and a grade of "C" or better in all other coursework in order to graduate. In addition, students shall pass three (3), five (5)-minute timings with 97 percent real-time accuracy at 180 wpm literary (with 1.4 syllabic density). Students must successfully complete an internship with no less than 40 hours of verified actual writing time for captioning. Students must successfully complete an internship with no less than 40 hours of verified actual writing time for CART. From internships, students prepare a captioned translation of one hour and a CART translation of one hour.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

*   Minnesota Transfer: (www.mntransfer.org/students/plan/s_ agreements.php?numResults=25&archive=false&from_ inst=70&from_prog=&to_inst=&Search=Search)

*   Anoka Technical College transfer student: (www.anokatech.edu/ BecomeStudent/Transfers.aspx)

Industry Information

Completion of the Broadcast Captioning/CART certificate allows graduates to work in a variety of settings either as broadcast captioners or as CART providers.

Broadcast captioners use realtime machine shorthand skills to create the captioning you see on television. This captioning is created to allow access to television broadcasts for people who are deaf and hard of hearing. Broadcast captioners work doing on-air captioning of live programming.

CART is a service that can be requested by people who are hard of hearing as an alternative to having a sign language interpreter. It falls under the Americans with Disabilities Act (ADA) as one way of providing equal access to services. Graduates can find work as CART providers in legal, educational and various trade fields.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for Gainful Employment Report.

Technical Education: 12 Credits

☐ ASL 1000   Deaf Studies/Culture* 3
☐ JRBC 1400   Realtime Principles 2
☐ JRBC 1405   Broadcast Captioning & CART Practicum 2
☐ JRBC 2126   Broadcast Captioning & CART Procedures & Research 3
☐ JRBC 2135   Broadcast Captioning & CART Internship 2
*ASL 1100 (American Sign Language I) may be substituted for Deaf Studies/Culture.

General Education/MnTC Requirements: 4 Credits

Four (4) elective general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:
☐ General Education/MnTC 4
Also see: Judicial Reporting AAS degree and Scoping/Proofreading certificate

Start Dates

Fall Semester...August
Spring Semester ....January

Faculty Contact

Jennifer Sati, RMR, CRR, CBC, CRI............................. 763-576-4064
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

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Program Information

The Anoka Technical College Scoping/Proofreading certificate is a 29-credit program to be completed in one-and-a-half years. Scoping/Proofreading students learn shorthand theory with Judicial Reporting students. Students also take Legal Terminology, Medical Terminology, Realtime Reporting Orientation, Realtime Reporting Technology, Business English and Transcription and English courses. There are three additional classes Scoping/Proofreading students are required to take: Advanced Proofreading and English Skills, Scoping Procedures and Advanced Transcript Production.

NOTE: This certificate is offered through the Judicial Reporting/Broadcast Captioning program.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Program Essentials

Laptop, steno machine, Eclipse student software. Students may use a loaner steno machine from the department. See instructor for specific requirements before purchasing any equipment.

Graduation Requirements

All Anoka Technical College students seeking a Scoping/Proofreading certificate must earn a grade of "C" or higher in every course in the program.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Scopists and proofreaders work in conjunction with court reporters to produce the final transcript that is prepared from court proceedings or depositions. Transcripts are accurate verbatim written records of the proceedings. At the end of a proceeding, some court reporters send their files to a scopist, who then edits the job for the court reporter. Scopists need to know how to read shorthand notes and use court reporting software. Other court reporters edit their own work but hire proofreaders to read over their transcripts to check for errors.

Wages/Outlook/Advancement

Scopists and proofreaders are self-employed and are paid by the page. Earnings are contingent on the following: time worked, expertise, speed, and efficiency.
Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for Gainful Employment Report.

Technical Education: 29 Credits

☐ JRBC 1000   Realtime Reporting Orientation 1
☐ JRBC 1005   Realtime Reporting I 4
☐ JRBC 1031   Foundations of Law 3
☐ JRBC 1105   Realtime Reporting II 4
☐ JRBC 1120   Realtime Reporting Technology 3
☐ JRBC 2011   Transcription & English I 3
☐ JRBC 2016   Transcription & English II 3
☐ JRBC 2030   Judicial Reporting Procedures...........................3
☐ JRBC 3101   Scoping Procedures 2
☐ HLTH 1040   Medical Terminology 2

Students must complete the JRBC classes in sequence.
Also see: Judicial Reporting AAS and Broadcast Captioning CART certificate

Start Dates

Fall Semester... August
Spring Semester .... January

Faculty Contact

Jennifer Sati, RMR, CRR, CBC, CRI.............................. 763-576-4064

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

	Fall Semester		Spring Semester	
1ˢᵗ YEAR	JRBC 1000 1		JRBC 1105 4	
	JRBC 1005 4		JRBC 1120 3	
	JRBC 1031 3		JRBC 2011 3	
	TOTAL...................................8		TOTAL...................................10	
	Fall Semester		**Spring Semester**	
2ⁿᵈ YEAR	JRBC 2016 3			
	JRBC 2030............................3			
	JRBC 3101 3			
	HLTH 1040...........................2			
	TOTAL 11			

ANOKA TECHNICAL COLLEGE
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Information Technology Management

Business Data Analyst
Associate of Applied Science (AAS) Degree

Technical Requirements.............45
General Education/MnTC 15
Total Credits 60

Program Information

The Anoka Technical College Business Data Analyst Associate of Applied Science (AAS) degree is a 60-credit program that focuses on graduates receiving the knowledge and skills necessary for employment and growth in entry-level business intelligence and data analyst professions. They will assist in the process of inspecting, cleansing, testing, and transforming data. Graduates will help interpret and visualize the data using various software tools and techniques to provide support in all decision making phases. Graduates will gain a solid understanding of information technology and applications used to support decision making. Program graduates will have the opportunity to interact and work with various functional managers in all parts of the company.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Business process analysis
2. Data mining
3. Data analysis
4. Define data patterns
5. Synthesize data
6. Information delivery and reporting

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

• Businesses are investing big-time in data analysis. Spending on big data and analytics will increase from $10 billion in 2012 to more than $32 billion in 2017, according to International Data Corporation. In context, that's about six times the growth rate of the overall information and communication technology market. Source: Minnesota Business Magazine.
• Data Scientist 80-20 rule- 80% of the time is data mining, and setting up the data to be analyzed, and 20% of the time is doing the analytical forecasting.
• Creates an entry to the workforce; Middle Skill Big Data Workers (MSBDW)

• Closet occupational field is Data Analyst, which is expected to grow 20-28 percent. As markets become more competitive, firms will need to use resources more efficiently. (U.S. Department of Labor, 2012) Job title examples: Data Analyst, Business Data Analyst. Information Specialist, Business Intelligence Analyst, Operations Data Analyst, Marketing Research Analyst, Information Clerk

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 45 Credits

☐ ACCT 1015	Principles of Accounting I	4
☐ BDAT 1000	Business Concepts	2
☐ BDAT 1010	Integrated Business Software	3
☐ BDAT 1025	Data Preparation for Analytics	3
☐ BDAT 1030	Data Analysis	4
☐ ITEC 1002	Networking Fundamentals	3
☐ ITEC 1016	Web Programming Technologies	4
☐ ITEC 1025	Project Management	4
☐ ITEC 2100	Programming Logic & Design	4
☐ ITEC 2120	DB Design & SQL	4
☐ ITEC 2140	Business Intelligence	4
☐ ITEC 2150	Advanced Business Intelligence	3
☐ TLIT 1005	Technology Fundamentals	3

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required from three different goal areas. Student is required to take one transferable course from MnTC Goal Area 4 and the following courses:

☐ ENGL 2105	Business and Technical Writing	4
☐ MATH 1550	Introduction to Statistics	4
☐ PHIL 1200	Technology, Society, and Ethics	3
☐ General Education/MnTC		4

Start Dates

Fall Semester..August, October
Spring Semester .... January, March
(Also multiple start option each semester.)

Faculty Contact

Vicki Baumgartner.. 763-576-4146

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

ANOKA TECHNICAL COLLEGE
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2018-2019
Business Data Analyst
Associate of Applied Science (AAS) Degree

Sample Program Sequence
Full Time

1st YEAR

Fall Semester	Spring Semester	Summer Semester
ITEC 1002..........3	ACCT 1015 4	MATH 1550.......4
ITEC 1016.........4	BDAT 1000........2	PHIL 1200 3
ITEC 2100 4	ITEC 2120.........4	**TOTAL 7**
TLIT 1005 3	MnTC.................4	
TOTAL 14	**TOTAL 14**	

2nd YEAR

Fall Semester	Spring Semester
BDAT 1025 3	BDAT 1010 3
BDAT 1030 4	ENGL 2105 4
ITEC 1025.........................4	ITEC 2140........................4
TOTAL 11	ITEC 2150........................3
	TOTAL 14

ANOKA
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Technical Requirements 57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical College Associate in Applied Science (AAS) degree in Information Technology with an emphasis in Database Design & Development is a 72-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in the high demand IT fields both today and in the future.
This unique program allows technical specialization in Database Design & Development while the common core courses and required electives from other options build a broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace.

The Database Design & Development AAS emphasis program provides students the knowledge needed to design and implement information technology solutions that meet business requirements. Students are prepared to enter the job market as Data Analysts, Software programmers, Database Developers, Business Analysts, or Systems Analysts. The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

The IT degree has an initial curriculum of over 90 courses in seven career areas:
• Database Design & Development
• Game Programming
• Mobile Development
• Network Analyst
• Network Management & Security
• Software Development
• Web Design & Development

Graduates will be encouraged to take advantage of access to corporate recruitment and IT recruiting firms. Internships and work-study positions will also be available. The IT graduate will be highly employable. The Associate of Applied Science (AAS) degree includes general education credits, which broaden knowledge beyond what is required in the technical field and places the student on track for future managerial positions.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.
7. Apply logical reasoning to a problem.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals	3
☐ ITEC 1016	Web Development Technologies	4
☐ ITEC 1025	Project Management	4
☐ ITEC 1035	Documentation Standards	2
☐ ITEC 1070	IT Support	1
☐ ITEC 2100	Programming Logic & Design	4
☐ ITEC 2105	JAVA Programming	4
☐ ITEC 2120	DB Design & SQL	4
☐ ITEC 2140	Business Intelligence	4
☐ ITEC 2145	Database Programming	4
☐ ITEC 2220	Database Administration & Security	4
☐ ITEC 2501	Android Application Development	4
☐ ITEC 2600	Application Development	4
☐ ITEC 2601	Database Application Development	4
☐ ITEC 2901	Integrated Capstone Project	4
☐ TLIT 1005	Technology Fundamentals	3

ANOKA
TECHNICAL COLLEGE
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Database Design & Development

Emphasis
Associate of Applied Science (AAS) Degree

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required from three different goal areas. Student is required to take one transferable course from MnTC Goal Area 4 and the following courses:

☐ ENGL 2105   Business and Technical Writing...........................4
☐ PHIL 1200   Technology, Ethics and Society...........................3
☐ General Education/MnTC 8

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

Start Dates

Fall Semester..August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Vicki Baumgartner.. 763-576-4146
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

First Semester

1ST YEAR		
ITEC 1002		3
ITEC 1016		4
ITEC 1070		1
ITEC 2100		4
TLIT 1005		3
TOTAL		**15**

ANOKA
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Program Information

The Anoka Technical College Database Design & Development diploma is a 57-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in the high demand IT fields both today and in the future.

This unique program allows technical specialization Database Design & Development while the common core courses and required electives from other options build a broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace. Anoka Technical College Database Design & Development diploma graduates will be specialists in one of the areas of emphasis in Information Technology and will also have a broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace.

The Database Design and Development diploma teaches students how to use industry standard software to both design and develop databases. Students also will learn how to develop software applications that use a back-end database. Standardized database design is emphasized. Students will collaborate on a development team as a part of their coursework.

The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

Graduates will be encouraged to take advantage of access to corporate recruitment and IT recruiting firms. Internships and work-study positions will also be available. The IT graduate will be highly employable.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals		3
☐ ITEC 1016	Web Development Technologies		4
☐ ITEC 1025	Project Management		4
☐ ITEC 1035	Documentation Standards		2
☐ ITEC 1070	IT Support		1
☐ ITEC 2100	Programming Logic & Design		4
☐ ITEC 2105	JAVA Programming		4
☐ ITEC 2120	DB Design & SQL		4
☐ ITEC 2140	Business Intelligence		4
☐ ITEC 2145	Database Programming		4
☐ ITEC 2220	Database Administration & Security		4

ANOKA TECHNICAL COLLEGE
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2018-2019
Database Design & Development
Diploma

☐ ITEC 2501   Android Application Development......................4
☐ ITEC 2600   Application Development....................................4
☐ ITEC 2601   Database Application Development 4
☐ ITEC 2901   Integrated Capstone Project................................4
☐ TLIT 1005   Technology Fundamentals 3

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

Start Dates

Fall Semester...August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Vicki Baumgartner 763-576-4146
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

First Semester	
1st YEAR	ITEC 1002...3
	ITEC 1016...4
	ITEC 1070...1
	ITEC 2100 4
	TLIT 1005..3
	TOTAL 15

ANOKA TECHNICAL COLLEGE
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Game Programming

Emphasis
Associate of Applied Science (AAS) Degree

Technical Requirements.............57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical College Associate in Applied Science (AAS) degree in Information Technology with an emphasis in Game Programming is a 72-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in IT fields with the highest demand, both today and in the future.

The Game Programming Associate in Applied Science (AAS) degree emphasis teaches students game programming languages and they learn using industry standard software to program and develop games. Upon completion, students will be prepared to enter the gaming industry in roles such as entry-level game programmer or game tester.

The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

The IT degree has an initial curriculum of over 90 courses in seven career areas:
• Database Design & Development
• Game Programming
• Mobile Development
• Network Analyst
• Network Management & Security
• Software Development
• Web Design & Development

This unique program allows technical specialization in one option while the common core courses and required electives from other options build a broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace. The Game Programming Associate of Applied Science (AAS) degree emphasis includes general education credits. This degree broadens knowledge beyond what is required in the technical field and places the student on track for future managerial positions.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.
7. Apply logical reasoning to a problem.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals		3
☐ ITEC 1016	Web Development Technologies		4
☐ ITEC 1025	Project Management		4
☐ ITEC 1070	IT Support		1
☐ ITEC 2100	Programming Logic & Design		4
☐ ITEC 2105	JAVA Programming		4
☐ ITEC 2311	User Interface Experience		4
☐ ITEC 2326	Gaming Technologies		4
☐ ITEC 2331	Advanced Gaming Technologies		4
☐ ITEC 2342	Game Scripting		2
☐ ITEC 2347	Software and Game Testing		4
☐ ITEC 2501	Android Application Development		4
☐ ITEC 2506	Apple Programming		4
☐ ITEC 2511	Apple Mobile Application Development		4
☐ ITEC 2901	Integrated Capstone Project		4
☐ TLIT 1005	Technology Fundamentals		3

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Game Programming
Emphasis
Associate of Applied Science (AAS) Degree

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required from three different goal areas. Student is required to take one transferable course from MnTC Goal Area 4 and the following courses:

☐ ENGL 2105   Business and Technical Writing............................ 4
☐ PHIL 1200   Technology, Ethics and Society 3
☐ General Education/MnTC 8

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

Start Dates

Fall Semester..August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Gerard Kne.. 763-576-4044
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

First Semester

1st YEAR		
	ITEC 1002...	3
	ITEC 1016...	4
	ITEC 1070...	1
	ITEC 2100	4
	TLIT 1005...	3
	TOTAL	**15**

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Program Information

The Anoka Technical College Game Programming diploma is a 57-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in IT fields with the highest demand, both today and in the future.

The Game Programming diploma teaches students game programming languages and they learn using industry standard software to program and develop games. Upon completion, students will be prepared to enter the gaming industry in roles such as entry-level game programmer or game tester.

The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

This unique program allows technical specialization in game programming while the common core courses and required electives from other IT options build a broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals	3
☐ ITEC 1016	Web Development Technologies	4
☐ ITEC 1025	Project Management	4
☐ ITEC 1070	IT Support	1
☐ ITEC 2100	Programming Logic & Design	4
☐ ITEC 2105	JAVA Programming	4
☐ ITEC 2311	User Interface Experience	4
☐ ITEC 2326	Gaming Technologies	4
☐ ITEC 2331	Advanced Gaming Technologies	4
☐ ITEC 2342	Game Scripting	2
☐ ITEC 2347	Software and Game Testing	4
☐ ITEC 2501	Android Application Development	4
☐ ITEC 2506	Apple Programming	4
☐ ITEC 2511	Apple Mobile Application Development	4
☐ ITEC 2901	Integrated Capstone Project	4
☐ TLIT 1005	Technology Fundamentals	3

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Game Programming
Diploma

Start Dates

Fall Semester...August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Gerard Kne.. 763-576-4044

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1ST YEAR	First Semester	
	ITEC 1002	3
	ITEC 1016	4
	ITEC 1070	1
	ITEC 2100	4
	TLIT 1005	3
	TOTAL	**15**

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Mobile Development
Emphasis
Associate of Applied Science (AAS) Degree

Technical Requirements 57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical College Associate in Applied Science (AAS) degree in Information Technology with an emphasis in Mobile Development is a 72-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in IT fields with the highest demand, both today and in the future.

The Mobile Development Associate in Applied Science (AAS) degree emphasis prepares students for software development positions in the areas of web and mobile applications. Student are exposed to a variety of languages used in web and mobile development. Students are given the opportunity to develop mobile applications for modern smart phone and tablet platforms. Collaboration and communication within a development team are emphasized in the coursework. Students are able to practice documenting and critiquing code for mobile and web applications.

The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

The IT degree has an initial curriculum of over 90 courses in seven career areas:
• Database Design & Development
• Game Programming
• Mobile Development
• Network Analyst
• Network Management & Security
• Software Development
• Web Design & Development

The unique program allows technical specialization in mobile development while the common core courses and required electives from other specializations build the broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace. The Mobile Development Associate of Applied Science (AAS) degree emphasis includes general education credits. This degree broadens knowledge beyond what is required in the technical field and places the student on track for future managerial positions.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.
7. Apply logical reasoning to a problem.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals	....	3
☐ ITEC 1016	Web Development Technologies	....	4
☐ ITEC 1025	Project Management	....	4
☐ ITEC 1035	Documentation Standards	....	2
☐ ITEC 1070	IT Support	....	1
☐ ITEC 2100	Programming Logic & Design	....	4
☐ ITEC 2105	JAVA Programming	....	4
☐ ITEC 2120	DB Design & SQL	....	4
☐ ITEC 2145	Database Programming	....	4
☐ ITEC 2501	Android Application Development	....	4
☐ ITEC 2506	Apple Programming	....	4
☐ ITEC 2511	Apple Mobile Application Development	....	4
☐ ITEC 2600	Application Development	....	4
☐ ITEC 2601	Database Application Development	....	4
☐ ITEC 2901	Integrated Capstone Project	....	4
☐ TLIT 1005	Technology Fundamentals	....	3

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Mobile Development
2018-2019
Emphasis
Associate of Applied Science (AAS) Degree

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required from three different goal areas. Student is required to take one transferable course from MnTC Goal Area 4 and the following courses:

☐ ENGL 2105   Business and Technical Writing...........................4
☐ PHIL 1200   Technology, Ethics and Society..........................3
☐ General Education/MnTC 8

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

Start Dates

Fall Semester...August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Gerard Kne... 763-576-4044
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR

First Semester	
ITEC 1002..	3
ITEC 1016..	4
ITEC 1070..	1
ITEC 2100	4
TLIT 1005..	3
TOTAL	**15**

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Program Information

The Anoka Technical College Mobile Development diploma is a 57-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in IT fields with the highest demand, both today and in the future.

The Mobile Development diploma prepares students for software development positions in the areas of web and mobile applications. Student are exposed to a variety of languages used in web and mobile development. Students are given the opportunity to develop mobile applications for modern smart phone and tablet platforms. Collaboration and communication within a development team are emphasized in the coursework. Students are able to practice documenting and critiquing code for mobile and web applications.

The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

The unique program allows technical specialization in mobile development while the common core courses and required electives from other specializations build the broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals	3
☐ ITEC 1016	Web Development Technologies	4
☐ ITEC 1025	Project Management	4
☐ ITEC 1035	Documentation Standards	2
☐ ITEC 1070	IT Support	1
☐ ITEC 2100	Programming Logic & Design	4
☐ ITEC 2105	JAVA Programming	4
☐ ITEC 2120	DB Design & SQL	4
☐ ITEC 2145	Database Programming	4
☐ ITEC 2501	Android Application Development	4
☐ ITEC 2506	Apple Programming	4
☐ ITEC 2511	Apple Mobile Application Development	4
☐ ITEC 2600	Application Development	4
☐ ITEC 2601	Database Application Development	4
☐ ITEC 2901	Integrated Capstone Project	4
☐ TLIT 1005	Technology Fundamentals	3

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Mobile Development
Diploma

Start Dates

Fall Semester...August, October
Spring Semester .... January, March
(Also multiple start options each semester.)

Faculty Contact

Gerard Kne... 763-576-4044

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

First Semester	
ITEC 1002	3
ITEC 1016	4
ITEC 1070	1
ITEC 2100	4
TLIT 1005	3
TOTAL	**15**

1st YEAR

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Network Analyst
Emphasis
Associate of Applied Science (AAS) Degree

Technical Requirements.............57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical College Associate of Applied Science (AAS) degree in Information Technology with an emphasis in Network Analyst is a 72-credit program that focuses on preparing computers in a network, installing and troubleshooting system configurations, helping companies achieve their network system goals. The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers
.

The IT degree has an initial curriculum of over 90 courses in seven career areas:
• Database Design & Development
• Game Programming
• Mobile Development
• Network Analyst
• Network Management & Security
• Software Development
• Web Design & Development

Graduates will be encouraged to take advantage of access to corporate recruitment and IT recruiting firms. Internships and work-study positions will also be available. The IT graduate will be highly employable. The Associate of Applied Science (AAS) degree includes general education credits, which broaden knowledge beyond what is required in the technical field and places the student on track for future managerial positions.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.
7. Apply logical reasoning to a problem.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals	3
☐ ITEC 1016	Web Development Technologies	4
☐ ITEC 1025	Project Management	4
☐ ITEC 1035	Documentation Standards	2
☐ ITEC 1070	IT Support	1
☐ ITEC 2100	Programming Logic & Design	4
☐ ITEC 2207	Windows Server Administration	4
☐ ITEC 2215	Linux/Web Server Administration	4
☐ ITEC 2220	Database Administration & Security	4
☐ ITEC 2230	Network Security Fundamentals	4
☐ ITEC 2407	Internetworking Devices I	4
☐ ITEC 2408	Internetworking Devices II	4
☐ ITEC 2440	IDS/IPS and Auditing	4
☐ ITEC 2450	Ethical Hacking	4
☐ ITEC 2901	Integrated Capstone Project	4
☐ TLIT 1005	Technology Fundamentals	3

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required from three different goal areas. Student is required to take one transferable course from MnTC Goal Area 4 and the following courses:

☐ ENGL 2105	Business and Technical Writing	4
☐ PHIL 1200	Technology, Ethics and Society	3
☐ General Education/MnTC		8

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development,

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Network Analyst
Emphasis
Associate of Applied Science (AAS) Degree

Network Analyst, Network Management and Security, Software Development, and Web Design & Development

Start Dates

Fall Semester..August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Tracy Hoffman 763-576-4198
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

First Semester

1st YEAR		
ITEC 1002		3
ITEC 1016		4
ITEC 1070		1
ITEC 2100		4
TLIT 1005		3
TOTAL		**15**

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Program Information

The Anoka Technical College Network Analyst diploma is a 57-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in the high demand IT fields both today and in the future.

This unique program allows technical specialization in Network Analyst while the common core courses and required electives from other options build a broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace.

The Network Analyst emphasis focuses on preparing computers in a network, installing and troubleshooting system configurations, helping companies achieve their network system goals.

The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

Graduates will be encouraged to take advantage of access to corporate recruitment and IT recruiting firms. Internships and work-study positions will also be available. The IT graduate will be highly employable.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.

Course Prerequisites

Some courses may require appropriate test score or completing basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals	......	3
☐ ITEC 1016	Web Development Technologies	......	4
☐ ITEC 1025	Project Management	......	4
☐ ITEC 1035	Documentation Standards	......	2
☐ ITEC 1070	IT Support	......	1
☐ ITEC 2100	Programming Logic & Design	......	4
☐ ITEC 2207	Windows Server Administration	......	4
☐ ITEC 2215	Linux/Web Server Administration	......	4
☐ ITEC 2220	Database Administration & Security	......	4
☐ ITEC 2230	Network Security Fundamentals	......	4
☐ ITEC 2407	Internetworking Devices I	......	4
☐ ITEC 2408	Internetworking Devices II	......	4
☐ ITEC 2440	IDS/IPS and Auditing	......	4
☐ ITEC 2450	Ethical Hacking	......	4
☐ ITEC 2901	Integrated Capstone Project	......	4
☐ TLIT 1005	Technology Fundamentals	......	3

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Network Analyst
Diploma

Start Dates

Fall Semester...August, October
Spring Semester .... January, March
(Also multiple start options each semester.)

Faculty Contact

Tracy Hoffman 763-576-4198
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	First Semester	
	ITEC 1002	3
	ITEC 1016	4
	ITEC 1070	1
	ITEC 2100	4
	TLIT 1005	3
	TOTAL	**15**

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Network Management & Security
Emphasis
Associate of Applied Science (AAS) Degree

Technical Requirements 57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical College Associate in Applied Science (AAS) degree in Information Technology with a emphasis in Network Management and Security is a 72-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in the high demand IT fields both today and in the future.

This unique program allows technical specialization in Network Management and Security while the common core courses and required electives from other options build a broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace.

The Network Management and Security emphasis focuses on the theory and practice of designing, deploying, and managing network technologies, network convergence, and network security. The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

The IT degree has an initial curriculum of over 90 courses in seven career areas:
• Database Design & Development
• Game Programming
• Mobile Development
• Network Analyst
• Network Management & Security
• Software Development
• Web Design & Development

Graduates will be encouraged to take advantage of access to corporate recruitment and IT recruiting firms. Internships and work-study positions will also be available. The IT graduate will be highly employable. The Associate of Applied Science (AAS) degree includes general education credits, which broaden knowledge beyond what is required in the technical field and places the student on track for future managerial positions.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.
7. Apply logical reasoning to a problem.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals	3
☐ ITEC 1016	Web Development Technologies	4
☐ ITEC 1025	Project Management	4
☐ ITEC 1070	IT Support	1
☐ ITEC 2100	Programming Logic & Design	4
☐ ITEC 2207	Windows Server Administration	4
☐ ITEC 2215	Linux/Web Server Administration	4
☐ ITEC 2407	Internetworking Device I	4
☐ ITEC 2408	Internetworking Device II	4
☐ ITEC 2411	Network Scripting	2
☐ ITEC 2415	Virtualization Technologies	4
☐ ITEC 2430	Firewall Security	4
☐ ITEC 2440	IDS/IPS and Auditing	4
☐ ITEC 2450	Ethical Hacking	4
☐ ITEC 2901	Integrated Capstone Project	4
☐ TLIT 1005	Technology Fundamentals	3

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Network Management & Security

Emphasis
Associate of Applied Science (AAS) Degree

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required from three different goal areas. Student is required to take one transferable course from MnTC Goal Area 4 and the following courses::

☐ ENGL 2105   Business and Technical Writing...........................4
☐ PHIL 1200   Technology, Ethics and Society...........................3
☐ General Education/MnTC 8

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

Start Dates

Fall Semester...August, October
Spring Semester .... January, March
(Also multiple start options each semester.)

Faculty Contact

Tracy Hoffman 763-576-4198
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

First Semester

1ˢᵗ YEAR

Course	Credits
ITEC 1002	3
ITEC 1016	4
ITEC 1070	1
ITEC 2100	4
TLIT 1005	3
TOTAL	**15**

ANOKA
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Program Information

The Anoka Technical College Network Management and Security diploma is a 57-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in the high demand IT fields both today and in the future.

This unique program allows technical specialization in Network Management and Security while the common core courses and required electives from other options build a broad IT foundation needed to under-stand the terminology and methodologies of other IT specialties in the workplace.

The Network Management and Security diploma focuses on the theory and practice of designing, deploying, and managing network technologies, network convergence, and network security. The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

Graduates will be encouraged to take advantage of access to corporate recruitment and IT recruiting firms. Internships and work-study positions will also be available. The IT graduate will be highly employable.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for Gainful Employment Report.

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals	3
☐ ITEC 1016	Web Development Technologies	4
☐ ITEC 1025	Project Management	4
☐ ITEC 1070	IT Support	1
☐ ITEC 2100	Programming Logic & Design	4
☐ ITEC 2207	Windows Server Administration	4
☐ ITEC 2215	Linux/Web Server Administration	4
☐ ITEC 2407	Internetworking Device I	4
☐ ITEC 2408	Internetworking Device II	4
☐ ITEC 2411	Network Scripting	2
☐ ITEC 2415	Virtualization Technologies	4
☐ ITEC 2430	Firewall Security	4
☐ ITEC 2440	IDS/IPS and Auditing	4
☐ ITEC 2450	Ethical Hacking	4
☐ ITEC 2901	Integrated Capstone Project	4
☐ TLIT 1005	Technology Fundamentals	3

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

(continued)

2018-2019
Network Management & Security
Diploma

Start Dates

Fall Semester..August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Tracy Hoffman... 763-576-4198
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

First Semester	
ITEC 1002	3
ITEC 1016	4
ITEC 1070	1
ITEC 2100	4
TLIT 1005	3
TOTAL	**15**

1st YEAR

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Software Development

Emphasis
Associate of Applied Science (AAS) Degree

Technical Requirements.............57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical College Associate in Applied Science (AAS) degree in Information Technology with an emphasis in Software Development is a 72-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in IT fields with the highest demand, both today and in the future.

The Software Development Associate of Applied Science (AAS) degree emphasis provides students with the knowledge to become part of a software application team that builds applications to solve industry needs. Students develop both the front-end graphical user interface (GUI) as well as the software code and back-end database for business applications. Students are given the opportunity to collaborate in a team environment for development and practice documenting and critiquing code. Collaboration and communication are emphasized as a part of the software development coursework.

The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

The IT degree has an initial curriculum of over 90 courses in seven career areas:
• Database Design & Development
• Game Programming
• Mobile Development
• Network Analyst
• Network Management & Security
• Software Development
• Web Design & Development

This unique program allows technical specialization in Software Development while the common core courses and required electives from other specializations build the broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace. The Software Development Associate of Applied Science (AAS) degree includes general education credits, which broaden knowledge beyond what is required in the technical field and places the student on track for future managerial positions.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.
7. Apply logical reasoning to a problem.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wage

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals	3
☐ ITEC 1016	Web Development Technologies	4
☐ ITEC 1025	Project Management	4
☐ ITEC 1035	Documentation Standards	2
☐ ITEC 1070	IT Support	1
☐ ITEC 2100	Programming Logic & Design	4
☐ ITEC 2105	JAVA Programming	4
☐ ITEC 2120	DB Design & SQL	4
☐ ITEC 2311	User Interface Experience	4
☐ ITEC 2347	Software and Game Testing	4
☐ ITEC 2340	Scripting languages	4
☐ ITEC 2501	Android Application Development	4
☐ ITEC 2600	Application Development	4
☐ ITEC 2601	Database Application Development	4
☐ ITEC 2901	Integrated Capstone Project	4
☐ TLIT 1005	Technology Fundamentals	3

ANOKA
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2018-2019
Software Development
Emphasis
Associate of Applied Science (AAS) Degree

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required from three different goal areas. Student is required to take one transferable course from MnTC Goal Area 4 and the following courses:

☐ ENGL 2105   Business and Technical Writing...........................4
☐ PHIL 1200   Technology, Ethics and Society...........................3
☐ General Education/MnTC 8

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

Start Dates

Fall Semester...August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Gerard Kne... 763-576-4044

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1ˢᵗ YEAR — First Semester

Course	Credits
ITEC 1002	3
ITEC 1016	4
ITEC 1070	1
ITEC 2100	4
TLIT 1005	3
TOTAL	**15**

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

Software Development
Diploma

Total Technical Credits...............57

Program Information

The Anoka Technical College Software Development diploma is a 57-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in IT fields with the highest demand, both today and in the future. The program provides students with the basis to become a professional software developer. The curriculum combines theoretical design and analysis instruction with extensive hands-on implementation practice using today's hottest software development environments. Students learn the skills necessary to be successful business analysts and software developers. The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

This unique program allows technical specialization in Software Development while the common core courses and required electives from other specializations build the broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace.

Graduates are encouraged to take advantage of access to corporate recruitment and IT recruiting firms. Internships and work study positions are available. IT graduates are highly employable, in many cases even before graduation.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals	3
☐ ITEC 1016	Web Development Technologies	4
☐ ITEC 1025	Project Management	4
☐ ITEC 1035	Documentation Standards	2
☐ ITEC 1070	IT Support	1
☐ ITEC 2100	Programming Logic & Design	4
☐ ITEC 2105	JAVA Programming	4
☐ ITEC 2120	DB Design & SQL	4
☐ ITEC 2311	User Interface Experience	4
☐ ITEC 2347	Software and Game Testing	4
☐ ITEC 2340	Scripting languages	4
☐ ITEC 2501	Android Application Development	4
☐ ITEC 2600	Application Development	4
☐ ITEC 2601	Database Application Development	4
☐ ITEC 2901	Integrated Capstone Project	4
☐ TLIT 1005	Technology Fundamentals	3

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

ANOKA
TECHNICAL COLLEGE
A member of Minnesota State

(continued)

Software Development
Diploma

Start Dates

Fall Semester...August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Gerard Kne.. 763-576-4044

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

First Semester	
ITEC 1002...3	
ITEC 1016...4	
ITEC 1070...1	
ITEC 2100 4	
TLIT 1005...3	
TOTAL 15	

1st YEAR

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

2018-2019
Web Design & Development
Emphasis
Associate of Applied Science (AAS) Degree

Technical Requirements..............57
General Education/MnTC 15
Total Credits 72

Program Information

The Anoka Technical College Associate in Applied Science (AAS) degree in Information Technology with an emphasis in Web Design and Development is a 72-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in the high demand IT fields both today and in the future.

This unique program allows technical specialization in Web Design and Development while the common core courses and required electives from other options build a broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace. Anoka Technical College Web Design and Development emphasis graduate will be a specialist in one of the areas of emphasis in Information Technology and will also have a broad IT foundation needed to under-stand the terminology and methodologies of other IT specialties in the workplace.

Web Developers are responsible for front and back-end web development. On the front-end, the web developer uses a combination of HTML, CSS, and scripting languages to build everything a user sees and interacts with on a website. On the back-end, they develop the application and interact with the server and database that make up the foundational structure of an interactive website using various web technologies. The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

The IT degree has an initial curriculum of over 90 courses in seven career areas:
• Database Design & Development
• Game Programming
• Mobile Development
• Network Analyst
• Network Management & Security
• Software Development
• Web Design & Development

Graduates will be encouraged to take advantage of access to corporate recruitment and IT recruiting firms. Internships and work-study positions will also be available. The IT graduate will be highly employable. The Associate of Applied Science (AAS) degree includes General Education credits, which broaden knowledge beyond what is required in the technical field and places the student on track for future managerial positions.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.
7. Apply logical reasoning to a problem.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

ANOKA TECHNICAL COLLEGE
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2018-2019
Web Design & Development
Emphasis
Associate of Applied Science (AAS) Degree

Technical Education: 57 Credits

- ☐ ITEC 1002   Networking Fundamentals.....................................3
- ☐ ITEC 1016   Web Development Technologies 4
- ☐ ITEC 1025   Project Management 4
- ☐ ITEC 1035   Documentation Standards....................................2
- ☐ ITEC 1070   IT Support 1
- ☐ ITEC 2100   Programming Logic & Design.............................4
- ☐ ITEC 2120   Database Design & SQL......................................4
- ☐ ITEC 2145   Database Programming..4
- ☐ ITEC 2215   Linux/Web Server Administration.......................4
- ☐ ITEC 2311   User Interface Experience...................................4
- ☐ ITEC 2317   Web Interactivity Tools.......................................4
- ☐ ITEC 2340   Scripting languages 4
- ☐ ITEC 2600   Application Development.....................................4
- ☐ ITEC 2601   Database Application Development 4
- ☐ ITEC 2901   Integrated Capstone Project.................................4
- ☐ TLIT 1005   Technology Fundamentals...................................3

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take one transferable course from MnTC Goal Area 4 and the following courses:

- ☐ ENGL 2105   Business and Technical Writing...........................4
- ☐ PHIL 1200   Technology, Ethics and Society 3
- ☐ General Education/MnTC 8

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

Start Dates

Fall Semester...August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Lisa Hubbard... 763-576-4085
Julie Myers.. 763-576-4072
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR

First Semester	
ITEC 1002...	3
ITEC 1016...	4
ITEC 1070...	1
ITEC 2100	4
TLIT 1005...	3
TOTAL	**15**

ANOKA TECHNICAL COLLEGE
A member of Minnesota State

Program Information

The Anoka Technical College Web Design and Development diploma is a 57-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in the high demand IT fields both today and in the future.

This unique program allows technical specialization in Web Design and Development while the common core courses and required electives from other options build a broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace.

The Anoka Technical College Web Design and Development graduate will be a specialist in one of the areas of emphasis in Information Technology and will also have a broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace. Web Developers are responsible for front and back-end web development. On the front-end, the web developer uses a combination of HTML, CSS, and scripting languages to build everything a user sees and interacts with on a website. On the back-end, they develop the application and interact with the server and database that make up the foundational structure of an interactive website using various web technologies.

The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers. Graduates will be encouraged to take advantage of access to corporate recruitment and IT recruiting firms. Internships and work-study positions will also be available. The IT graduate will be highly employable.

Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

ITEC 1002, ITEC 1016, ITEC 1070, ITEC 2100, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
- Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)

- Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the seven emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement

Wage information is available from the Minnesota Department of Employment and Economic Development (http://mn.gov/deed/job-seekers/job-outlook/index.jsp).

Gainful Employment

Follow this link for a Gainful Employment Report.

Technical Education: 57 Credits

☐ ITEC 1002	Networking Fundamentals		3
☐ ITEC 1016	Web Development Technologies		4
☐ ITEC 1025	Project Management		4
☐ ITEC 1035	Documentation Standards		2
☐ ITEC 1070	IT Support		1
☐ ITEC 2100	Programming Logic & Design		4
☐ ITEC 2120	Database Design & SQL		4
☐ ITEC 2145	Database Programming		4
☐ ITEC 2215	Linux/Web Server Administration		4
☐ ITEC 2311	User Interface Experience		4
☐ ITEC 2317	Web Interactivity Tools		4
☐ ITEC 2340	Scripting languages		4
☐ ITEC 2600	Application Development		4
☐ ITEC 2601	Database Application Development		4
☐ ITEC 2901	Integrated Capstone Project		4
☐ TLIT 1005	Technology Fundamentals		3

Also see AAS degrees and diplomas in: Business Data Analyst, Database Design & Development, Game Programming, Mobile Development, Network Analyst, Network Management and Security, Software Development, and Web Design & Development

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(continued)

Web Design & Development

Diploma

Start Dates

Fall Semester...August, October
Spring Semester .... January, March
(*Also multiple start options each semester.*)

Faculty Contact

Lisa Hubbard... 763-576-4085
Julie Myers.. 763-576-4072
For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Sample Program Sequence
Full Time

1st YEAR	First Semester	
	ITEC 1002..	3
	ITEC 1016..	4
	ITEC 1070..	1
	ITEC 2100	4
	TLIT 1005..	3
	TOTAL	**15**

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Please note: Not all courses are offered every semester. Courses subject to change; please check your program guide sheet for the most up-to-date course information.

Accounting

ACCT 1015 Principles of Accounting I, 4 credits
This course is the first in a series. It is an introductory course that covers financial accounting concepts. The course focuses on analyzing business transactions and understanding their effects on the financial statements. The topics covered include financial statement preparation, general journal and ledger, accruals and deferrals, purchase and sales transactions, internal control and cash, current assets, fixed assets and depreciation, inventory valuation, current and long-term liabilities, and owners' equity. (Prerequisites: None)

ACCT 1025 Principles of Accounting II, 4 credits
This course is the second in a series. The topics covered in this course include cash flow statements, an introduction to managerial and cost accounting, and financial statement analysis. (Prerequisites: ACCT 1015 Principles of Accounting I)

ACCT 1030 Payroll Accounting, 2 credits
This course covers various state and federal laws pertaining to the computation and payment of salaries, wages and other compensation arrangements. Topics covered include preparation of employment records, calculation of compensation under a variety of situations, payroll registers, employee earnings records, journal entries, and state and federal employment reports. (Prerequisites: None)

ACCT 1035 Income Tax I, 3 credits
This course provides an explanation and interpretation of the Internal Revenue Code as applied to basic individual income tax returns. Material covered includes filing requirements, gross income inclusions and exclusions, itemized deductions, employee expenses, personal business expenses, tax credits, and Minnesota state taxes for individuals. The use of tax software will also be included in this course. (Prerequisites: none)

ACCT 1055 Computerized Accounting: Peachtree, 2 credits
This course uses Peachtree accounting software to introduce the use of computers to perform accounting functions including chart of accounts creation and maintenance, general journal entries, accounts receivable and accounts payable management, inventory procedures, and financial statement analysis. (Prerequisites: None)

ACCT 1065 Computerized Accounting: QuickBooks, 2 credits
QuickBooks software is used to demonstrate the capabilities of computerized accounting software. Program projects involve creating and maintaining computerized accounting systems to perform accounting functions including chart of accounts creation and maintenance, general journal entries, accounts receivable and accounts payable management, inventory procedures, and financial statement analysis. (Prerequisites: None)

ACCT 1100 Cost Accounting, 3 credits
Cost accounting is concerned with the use of accounting data to plan and evaluate operations and personnel of the firm. The focus is on planning, decision-making, and control by the organization and on the accounting systems that assist managers in their decisions. Course topics include cost concepts, cost volume profit analysis, differential analysis, cost estimation and regression analysis, job costing, process costing, activity based costing, service department allocation, joint costs and by-products, budgeting, transfer pricing, and variance analysis. (Prerequisites: ACCT 1025)

ACCT 1110 Income Tax II, 3 credits
This course provides a working knowledge of advanced federal income tax topics including depreciation, business use of home, income from rentals and royalties, partnerships, S-Corporations, and estates and trusts. Basic corporate tax returns are also discussed. (Prerequisites: ACCT 1035)

ACCT 1120 Intermediate Accounting I, 3 credits
This course will explore accounting as a process of measurement and communication of economic data with an emphasis on the techniques of recording, classifying, measuring, and reporting economic data. The primary topics covered include a review of the accounting process, preparation of financial statements, time value of money concepts, income measurement, cash and receivables, and inventories. (Prerequisites: ACCT 1025)

ACCT 1130 Intermediate Accounting II, 3 credits
This course is a continuation of ACCT 1120 with an emphasis on accounting requirements and procedures that relate to operational assets, investing activities, current liabilities and contingencies, bonds and long- term notes, leases, deferred income taxes, shareholders equity, share-based compensation, earnings per share, accounting changes and error corrections, and advanced cash flow analysis. (Prerequisites: ACCT 1120)

ACCT 1160 Advance QuickBooks, 2 credits
This course is a preparatory course for the Certified QuickBooks User Exam. The Certified QuickBooks User designation is conferred by Intuit. The course topics include: QuickBooks setup, QuickBooks utilities and general product knowledge, and the QuickBooks processes involving list management, items, sales, purchases, payroll reports, basic accounting, and customization. (Prerequisites: ACCT 1015 and ACCT 1065)

ACCT 1170 Advanced Payroll Accounting, 2 credits
This course covers the skills and body of knowledge required of payroll professionals and functions as a preparatory course for the Fundamental Payroll Certification (FPC) exam. FPC certification is conferred by the American Payroll Association (APA). The course content covers the advanced study of payroll concepts, paycheck calculations, fringe benefits, payroll reporting and employment taxes, record keeping and payroll practices, payroll accounting, and management and administration. (Prerequisites: ACCT 1015 and ACCT 1030)

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ACCT 1200 Bookkeeper Certificate Preparatory Course, 3 credits
This course serves as a preparatory course for the Certified Bookkeeper exam. Certification is conferred by the American Institute of Professional Bookkeepers (AIPB). The course material includes adjusting entries, error correction, payroll, depreciation, inventory, internal controls, and fraud prevention. (Prerequisites: ACCT 1025, ACCT 1030, and ACCT 1035)

ACCT 1210 Registered Tax Return Preparer, 3 credits
This course is a preparatory course for the Registered Tax Return Preparer (RTRP) Competency Test. RTRP certification is conferred by the Internal Revenue Service (IRS). The course topics include filing status, filing requirements, exemptions, income, adjustments to income, itemized deductions, credits, gain/loss on sale of assets, other taxes like Alternative Minimum Tax, self-employment tax, and penalties. (Prerequisites: ACCT 1110)

ACCT 1225 Accreditation in Accountancy Preparatory Course, 3 credits
This course serves as a capstone course covering financial accounting and financial statement preparation, business consulting services, taxation, business law, and ethics and professional conduct. It will also prepare the student for the ACAT Comprehensive examination for Accreditation in Accountancy. The ACAT exam is the required exam for state licensure as a Registered Accounting Practitioner (RAP). For students not taking the ACAT exam, this course serves as a capstone course for review and will require students to confront and resolve accounting problems by integrating and applying skills and techniques in previous accounting courses.

Administrative Specialist

ADSC 1003 Introduction to Keyboarding and Speedbuilding, 2 credits
This course emphasized fundamental keyboarding skills as well as technique. Touch keyboarding is introduced and/or reviewed covering both alphabetic and figure keys. Speed and accuracy development is stressed and daily practice is expected. (Prerequisites: None)

ADSC 1006 Business Law, 4 credits
Business Law is an introduction to the principles of law as they apply to citizens and businesses. Topics include the civil and criminal court systems, contracts, Uniform Commercial Code, bailments, negotiable instruments, agency and employment, consumer protection laws, ethics, cyberlaw, environmental law, and employment discrimination. Online activities will be included in the course. (Prerequisites: None)

ADSC 1010 Keyboarding I, 3 credits
Keyboarding I covers touch-typing skills and introduces basic word processing skills. The primary focus of this class is on increasing keyboarding speed and accuracy. Formatting techniques for business documents including letters, memos, tables, and reports and proofreading techniques are introduced. (Prerequisites: ADSC 1003)

ADSC 1021 Keyboarding II, 3 credits
Keyboarding II is a continuation of Keyboarding I with emphasis on building even greater speed and accuracy in keyboarding skill. In addition, advanced formatting techniques and advanced word processing skills will be practiced. Documents produced include multi-page reports and letters, complex tables, and specialized business documents such as newsletters and forms. Continued proofreading practice is also included in this course. (Prerequisites: ADSC 1010)

ADSC 1025 Keyboarding Skillbuilding, 2 credits
Keyboarding Skillbuilding is an advanced keyboarding course designed to increase keyboarding speed and accuracy to employment levels of 45+ net words per minute (nwpm). (Prerequisites: ADSC 1010 or equivalent keyboarding speed of 35 nwpm proven by testout with the instructor)

ADSC 1031 Business English Skills, 3 credits
This course is designed to provide an in-depth study of English as used in a business setting. This review will include the use of many practical applications of grammar, word, and language mechanics such as punctuation, capitalization, and spelling. (Prerequisites: None)

ADSC 1042 Applied Medical Terminology for Scribing, 2 credits
This course covers word analysis, spelling, pronunciation, and usage of word roots, prefixes, suffixes, and abbreviations common to the medical profession. Emphasis will be placed on diagnosis, procedure, pharmaceutical, and laboratory terms. Medical terminology will be applied to the human body system and reviewed by practicing real-time scribing of medical records from dictation into the electronic health record. (Prerequisites: HITM 1110 or HLTH 1040)

ADSC 1045 Administrative Office Procedures, 4 credits
This course examines the role and responsibilities of the office professional. This course covers filing rules, records management procedures, transcription, telephone etiquette, setting up travel arrangements, compiling itineraries, producing trip expense reports, creating business documents including basic letters, memos, reports, notices, agendas, and minutes of meetings. The course also includes time management principles and the preparation and presentation of researched information utilizing software and verbal presentation skills. (Prerequisites: None)

ADSC 1054 Office Bookkeeping, 4 credits
This course covers an introduction to fundamental accounting principles with the primary focus on bookkeeping techniques and practices. Analyzing business transactions, recording transactions using general ledger software, cash and banking procedures, employer and employee payroll taxes, the basic financial statements, and completing the accounting cycle will also be covered. (Prerequisites: None)

ADSC 1055 Electronic Health Records, 2 credits
This course emphasizes essential computer concepts important for the successful use of computers in any medical career setting. The history and standards for electronic health records (EHR) will be examined, and simulated exercises with a fully functional electronic health records program will be completed. (Prerequisites: None)

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ADSC 1064 Government, Courts & Criminal Law, 3 credits
This course begins with a review of the U.S. Constitution and the branches of government and continues with an introduction to the state and federal court systems, pleadings, and court procedures. The second half of the course covers types and classifications of crimes, criminal statutes, investigative procedures, Constitutional rights of the defendant, pretrial and trial procedures and documents for juveniles and adults, and sentencing patterns. (Prerequisites: none)

ADSC 1075 Corporate Law, Collections & Bankruptcy, 3 credits
The first half of this course covers types of business organizations, creation of a corporation, preparation of corporate documents, administration of corporate meetings, procedures for amending and dissolving a corporate structure and Intellectual Property. The second half covers debtors' rights and creditors' remedies under the Uniform Commercial Code, the collection process, and bankruptcy law. (Prerequisites: None)

ADSC 1085 Probate & Real Estate Law, 4 credits
During the first half of this course, the focus is on real estate law as it applies to a residential transaction. It includes the fundamentals of real estate law and the preparation of real estate documents. The second half of the course covers estate planning (wills, trusts, etc.) and estate administration (probate court). Conservatorships and guardianships are also included. (Prerequisites: None)

ADSC 1095 Family Law & Civil Litigation, 4 credits
The focus of this course is on the terminology, documents, and legal procedures used in family law and other civil litigation. The course includes marital dissolution, adoption, paternity, personal injury, product liability, medical malpractice, workers' compensation, and liquor liability using standard court procedures and alternate dispute resolution. (Prerequisites: None)

ADSC 1100 Legal Research, Citations, & Office Procedures, 4 credits
This course is designed to integrate legal office tasks into the electronic office setting. It includes law office personnel and facilities, legal ethics, filing and reminder systems, time and billing records, client relationships, communications methods, office equipment and supplies. This course is also an introduction to legal research. It includes finding the law and citing the law. (Prerequisites: None)

ADSC 1111 Legal Transcription, 2 credit
This is a transcription course which involves transcribing dictated material into usable documents. In addition, the course will cover basic formatting techniques for letters and legal pleadings. Emphasis is on the development of accuracy, proofreading, and correcting skills. (Prerequisites: None)

ADSC 1120 Legal Transcription II, 2 credits
This is an advanced legal transcription and keyboarding course. Students will prepare a variety of legal documents. In addition, the course will cover basic formatting techniques for simple business documents such as tables and reports. Emphasis is on advanced editing skills, speed, and accuracy. (Prerequisites: ADSC 1111)

ADSC 1135 Legal Administrative Assistant Internship, 2 credits
This course is designed to provide the student with a purposeful occupational experience in a legal setting. Each internship is individually arranged to allow the student to apply classroom skills to an on-the-job situation. (Prerequisites: Completion of Legal Administrative Assistant program and instructor approval)

ADSC 1142 Integrated Software Applications, 4 credits
This course takes a project-based approach to teaching the integrating capabilities of Microsoft Office software while emphasizing applying critical-thinking skills to business situations. Previously learned software techniques; communications skills in the areas of spelling, grammar, punctuation, and formatting; and decision-making capabilities are utilized in the course as well. The class takes a simulation approach that requires problem-solving in the areas of appropriate choice of message format and software use, including cloud and collaboration tools. (Prerequisites: None)

ADSC 1162 Microsoft PowerPoint, 2 credits
This course is an in-depth study of Microsoft PowerPoint covering creating and editing a presentation with pictures, shapes, and Word-Art. Also covered is reusing presentation, adding media and animation, and navigating a presentation using hyperlinks and action buttons. The class will also explore customizing slide, handout, and notes masters and modifying a presentation with customized text boxes, SmartArt, and shapes. Appropriate presentation design concepts are reviewed. (Prerequisites: None)

ADSC 1171 Microsoft Excel, 2 credits
This course offers an in-depth presentation of functionality of Microsoft Excel in order to acquaint student with the proper procedures to create worksheets suitable for coursework, professional purposes, and personal use. The course uses an exercise-oriented approach that allows learning by doing. (Prerequisites: None)

ADSC 1181 Microsoft Access, 2 credits
This course is an in-depth study of Microsoft Access that covers creating and maintaining a database along with creating simple tables, queries, reports and forms. More advanced techniques for creating complex queries and customized reports and forms will also be covered. (Prerequisites: None)

ADSC 1197 Microsoft Word, 4 credits
This course covers utilization of Microsoft Word software to perform word processing applications. This intensive course covers both basic and advanced features of the software package. The concepts and applications taught in the course will promote decision-making, problem solving, and critical thinking. (Prerequisites: None)

ADSC 1206 Written Business Communications, 4 credits
This course covers the process of creating effective business messages. Communication skills will be developed by composing business correspondence. Proper grammar, spelling, punctuation, and capitalization rules will be reviewed. Projects will focus on effective writing with an emphasis on positive, negative, informative, and persuasive messages.

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Writing for technology applications such as e-mail, social media, and blogs is included along with job-search documents including a resume and cover letter. (Prerequisites: ADSC 1031)

ADSC 1283 Medical Office Procedures, 4 credits
This course introduces the concepts and skills needed for a successful career as a medical administrative professional and explores the use of a medical practice management software (scheduling, billing, and insurance) and electronic health records software, including entering front office, clinical care, and coding information. Other topic include various claim forms, financial policies and collections, the Health Insurance Portability and Accountability Act (HIPAA), office professionalism, and customer service skills. (Prerequisites: None)

ADSC 1340 Business Job Seeking Skills, 1 credit
The student will develop key job-search skills needed for a successful self-directed job search as well as the critical attitudes needed for job keeping. A resume, application letters, and other employment-related letters and documents will be prepared. (Prerequisites: None)

ADSC 1341 Electronic Career Search, 1 credit
In this course, students will develop a Web-based portfolio designed to create a living showcase of their education, career, and personal achievements. Students will digitally document and share their education, employment history, activities and goals with potential employers. It is an ideal tool to support job applications, college or graduate admissions, and competitions. (Prerequisites: None. Keyboarding and basic computer skills recommended)

ADSC 1451 Technology Tools for the Workplace, 3 credits
This course is designed to prepare students to become knowledgeable and comfortable in the use of current and new technologies used in personal and work setting. Students will learn how to utilize specific technologies that can enhance administrative assistant or office manager careers. The course will explore a variety of software, mobile, and Internet technology tools that are useful for effectively managing administrative and collaborative tasks in a business setting. Types of technologies explored include calendar, organizational, collaboration, publishing, and professional development applications. (Prerequisites: None)

Architectural and Construction Technology

ARCH 1000 Residential Construction, 2 credits
Techniques for residential construction in Minnesota are the focus of this course. Building materials and construction methods will be covered through lecture and illustrated examples. Building systems covered will be the footing, foundation, floor framing, wall framing, and roof framing moisture protection and windows and doors. (Prerequisites: None)

ARCH 1002 Construction Print Reading, 2 credits
This course covers the knowledge required for a drafter or estimator to interpret residential and commercial construction drawings. Topics covered include architectural floor plans, elevations, sections, details and material schedules. Also covered are drafting symbols, material abbreviations, reading an architectural scale ruler, construction calculations and dimensioning standards for the construction industry. (Prerequisites: None)

ARCH 1004 Introduction to the Architectural Profession, 2 credits
This course introduces the entry-level architectural technician to topics in the profession of architecture. Introducing the business aspects of the architectural profession will prepare the graduate architectural technician for a role in an office setting. Topics covered will be project economics, project delivery methods, contracts, industry organizations, construction codes and zoning regulations, as well as job seeking skills for the architectural industry. (Prerequisites: None)

ARCH 1015 Commercial Construction, 2 credits
Techniques for constructing light commercial to high- rise construction is this course focus. Building materials and construction methods will be covered with lecture and illustrated examples. Building systems covered are footings, foundations, masonry, steel framing, precast concrete, curtain wall, flat roof construction, hollow metal doors, aluminum window frames and moisture protection. (Prerequisites: None)

ARCH 1031 Building Systems, 2 credits
The architectural technician needs to understand all components of a building, including: plumbing, heating/air conditioning and ventilation (HVAC), electricity and insulation R-values. An overview of each component will be covered through lecture, illustrated examples and projects. (Prerequisites: ARCH 1000)

ARCH 1040 Residential Graphics, 1 credit
This course focuses on the process to analyze and draw a small one-story residence design to meet industry standards and building codes. From a given design concept, students will draw a floor plan, learning how to determine the correct dimensions for placing walls and selecting code compliant door and window sizes. Exterior elevations of the house will be drawn based on wall section details that will also be drawn. The drawing will be created on computer aided design (CAD) software. (Prerequisites: None; Co-requisites: ARCH 1043)

ARCH 1045 Commercial Graphics, 1 credit
This course is designed to advance knowledge in commercial construction detailing. The major focus is understanding the industry standards of drawing commercial building material connections using computer aided design (CAD) software. (Prerequisite: ARCH 1040)

ARCH 1043 Architectural CAD I, 3 credits
The architectural technician must gain mastery of industry standard Computer Aided Drafting (CAD) software and computer drafting techniques. This is the first course required to gain mastery. This course will be using the newest version of industry standard CAD software to teach the basic drawing and editing commands. Other topics covered will be placing text, dimensioning, and plotting architectural drawings. The course covers drawing simple floor plans and exterior elevations of a building. (Prerequisites: None)

ARCH 1052 Architectural CAD II, 3 credits
You will begin to see the power of AutoCAD software when taking this course. This course is a continuation of Architectural CAD I. You

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will continue to gain mastery of the draw and edit commands, and also you will become familiar with advanced commands the architectural technician will use on the job. This course will focus on the use of paper space/model space for architectural drafting applications. The drawing projects will be residential plans, sections, and exterior elevations. (Prerequisites: ARCH 1040 and ARCH 1043)

ARCH 2005 Residential CAD Studio, 4 credits
This course covers creating residential construction drawings use by a residential building contractor to obtain bids and building permits using computer aided design (CAD) software. Topics covered include analyzing home design, implementing wood framing technology, complying with residential building codes, and CAD drafting skills. (Prerequisites: ARCH 1000 and ARCH 1052)

ARCH 2025 Revit Architectural 3D CAD, 2 credits
This course provides a hands-on learning environment in the 3D modeling software, Revit. The course focus will be understanding build and modify commands, manipulating views, inserting 3-D objects, rendering, and preparing drawing sheets for plotting construction documents. (Prerequisites: ARCH 1043)

ARCH 2027 Intermediate Revit Architecture 3D CAD, 2 credits
This course is designed to build on the fundamental understanding and skills of a beginning Revit Architecture user. The primary objective of this intermediate course is to expand the student's knowledge of the power of BIM (building information modeling). The student will complete a residential project and all the required software settings and sheet set up for construction drawings. Also, 3-D modeled rendering will be emphasized and the student will create a simple walk through of the project. (Prerequisites: ARCH 2025 or by instructor approval of prior Revit Architecture experience)

ARCH 2029 Advanced Revit 3D CAD, 3 credits
This course will focus on the creation of building information model for a commercial building, resulting in a construction drawing set. Topics covered include advanced modeling commands, linking CAD drawings, worksets, rendering techniques and the creation of 3D family objects. (Prerequisites: ARCH 2027)

ARCH 2030 Building Codes, 1 credit
The construction building code provides a framework for the architectural design process. A code review must be performed to ensure conformity to life and safety issues. The focus of this course will be the International Building Code and Minnesota Accessibility Code.
Course topics will include occupancy groups, occupancy loads, building area, building height, types of construction, means of egress and accessibility dimensional clearances. (Prerequisites: ARCH 1015)

ARCH 2055 Commercial CAD Studio, 3 credits
This course will focus on the creation of a building information model for a commercial building, resulting in a construction drawing set. Topics covered include advanced modeling commands, linking CAD drawings, worksets, rendering techniques and the creation of 3D family objects. (Prerequisites: ARCH 2027)

ARCH 2070 Commercial Design, 2 credits
The thought process of an architect during the design phase of commercial construction will be the focus of this course. The students will be exposed to building design, office space planning and major architectural history movements that have shaped the American architectural scene. Other topics include scale, proportion, circulation patterns, and exterior building massing. The student will take from the course an understanding of the architectural design process and terminology used when discussing architectural design. (Prerequisites: ARCH 1015)

ARCH 2085 Structural Technology, 3 credits
This course will focus on the basic concepts of building structures for wood and steel structural systems. Topics covered include examining section and material properties, calculating live load and dead load, calculating maximum moment and maximum shear in beams, and calculating maximum beam deflection. Calculation results will determine the size of the joist, beam or column to be selected for a building. Other topics include interpreting structural drawing details, analyzing welded and bolted connections, and drafting structural framing and plans and connection details. (Prerequisites: ARCH 1000 and ARCH 1043)

American Sign Language

ASL 1000 Deaf Studies/Culture, 3 credits
This course is designed to introduce and help students understand the Deaf community as a linguistic and cultural minority group. The role of Deaf people in the larger society, political activism, laws, access to information, educational philosophies and methods, and communication systems will be introduced. Students will learn the differences between Deaf; deaf, late-deaf, oral deaf, and hard of hearing. The course also examines the historical treatment of deaf people as well as educational influences, causes, and treatment of deafness. Students will learn about sign interpreters, oral interpreters, and transliterators and how to hire an interpreter. (MN Transfer Goal 7) (3 Credits Lecture/0 Credits Lab)

ASL 1100 American Sign Language I, 3 credits
This MN Transfer course introduces students to American Sign Language, the visual/gestural language used by the Deaf community, and aspects of Deaf culture. The differences in communication preferences used by deaf individuals will be explored, as well as techniques to best communicate with people who are hard of hearing. The student will learn how to articulate all the letters and numbers; develop accuracy in regard to letter formation, palm orientation and hand position; fingerspell words clearly and accurately; recognize words and numbers. (MN Transfer Goal 8) (3 Credits Lecture/0 Credits Lab)

Automotive Technician

AUTO 1000 Orientation and Safety, 1 credit
This course covers Occupational Safety and Health Administration (OSHA) safety requirements, along with general shop procedures needed before entering the automotive lab. Orientation will include shop policies, location and utilization of appropriate safety equipment, including but not limited to eye-wash stations, fire extinguisher and exhaust ventilation systems. (Prerequisites: None)

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AUTO 1010 General Automotive Service, 2 credits
This course explores the careers available in the automotive industry. The purpose and identification of hand tools, special automotive tools, automotive shop, and diagnostic equipment, including tire mounting and balancing equipment, vehicle lifts, jacking equipment, and precision measuring devices will be discussed and demonstrated. Students will be provided the opportunity to demonstrate the safe and accurate use of those tools and equipment. General preventative maintenance and service procedures of the engine, drivetrain, and running gear will be addressed and performed. Automotive service information systems and other resources will be addressed and utilized. (Prerequisites: None) (Co-requisites: AUTO 1000, AUTO 1167, AUTO 2145, and AUTO 2159)

AUTO 1167 Vehicle Electronics, 5 credits
This course reviews the fundamentals of electricity and electronics as applied to the automotive industry. Topics addressed include the principles and theory of electricity, electrical terminology, electro-magnetism; including motors and induction, the principles of semi-conductors, basic automotive computer operation, including the operation of sensor, output or control signals, and data communication circuits. Also included in this course is the performance of accurate electrical measurements using a Digital Multi-meter (Volts, Ohms, Amps) and other appropriate tools; diagnosis and performance of electrical wiring repairs; and the understanding electrical system failures and basic diagnostic principles. Reading and interpreting vehicle service manual or electronic service information electrical wiring schematics will also be covered. (Prerequisites: None)

AUTO 2005 Supervised Internship I, 2 credits
This course will require 80 hours of documented on-the-job work/training to be performed in an instructor approved and contracted automotive service facility. This course provides an opportunity for the student to apply knowledge and skills gained in the first semester Automotive Technician program courses to the real world service and repair environment. The student will also be provided opportunities to demonstrate, practice, and develop industry standard soft skills, including communication, team work, maintaining high quality of work, and demonstrating good personal habits, attitude, judgement, and initiative. (Prerequisites: AUTO 2145 and AUTO 2159) (Co-requisites: AUTO 2164, AUTO 2183, and AUTO 2166)

AUTO 2006 Supervised Internship II, 2 credits
This course will require 80 hours of documented on-the-job work/training to be performed in an instructor approved and contracted automotive service facility. This course provides an opportunity for the student to apply knowledge and skills gained in the first and second semester of the Automotive Technician program courses to the real world service and repair environment. The student will also be provided opportunities to demonstrate, practice, and develop industry standard soft skills, including communication, team work, maintaining high quality of work, and demonstrating good personal habits, attitude, judgement, and initiative. (Prerequisites: AUTO 2005, AUTO 2164, AUTO 2166, and AUTO 2183) (Co-requisites: AUTO 2119 and AUTO 2129)

AUTO 2007 Supervised Internship III, 2 credits
This course will require the student to perform 80 hours of documented on-the-job work/training at an instructor approved and contracted automotive service facility. This course provides an opportunity for the student to apply knowledge and skills gained in the first, second, and third semester of the Automotive Technician program courses to the real world service and repair environment. The student will also be provided opportunities to demonstrate, practice, and develop industry standard soft skills, including communication, team work, maintaining high quality of work, and demonstrating good personal habits, attitude, judgement, and initiative. (Prerequisites: AUTO 2006, AUTO 2119, and AUTO 2129) (Co-requisites: AUTO 2135, AUTO 2175, and AUTO 2187)

AUTO 2119 Engine Repair & Service, 6 credits
This course covers the theory of operation and common service procedures associated with major engine repair. This includes the standard measurements of the cylinder head and block assemblies to determine if machine work is needed, and exploration of how the new engine technology is adapted to hybrid vehicles. (Prerequisites: AUTO 1000, AUTO 1010, and AUTO 1167)

AUTO 2129 Automatic Transmission Conditions, 6 credits
This course covers the construction and operational theory of automatic transmissions/transaxles; the complete disassemble and reassemble of two different automatic transmission/transaxles with all clutch pack clearances; end-play measurements; including proper use of special disassemble and reassembly tools; and access and interpret scan tool use and diagnostic procedures for evaluating the automatic transmission data. (Prerequisites: AUTO 1000, AUTO 1010, and AUTO 1167)

AUTO 2130 Advanced Engine & Automatic Transmission Diagnosis, 3 credits
This course covers the theory, operation, and diagnosis of advanced powertrain systems, including advanced valve timing systems; variable displacement systems; electronic valve bodies; and service procedures associated with major and hybrid engine/transmission repair. (Prerequisite: AUTO 1000: Co-requisites: AUTO 2119, 2129)

AUTO 2135 Manual Drive Train Systems & Service, 4 credits
This course covers the operational theory and repair procedures of the drive train and axles of passenger cars and light duty trucks. Includes front drive and rear drive vehicles. Lab experiences provide an opportunity to service vehicles. (Prerequisites: AUTO 1010 and AUTO 1167)

AUTO 2145 Suspension & Steering System Service, 4 credits
This course covers the operational theory and repair of automotive suspension and steering systems. Two-wheel and four-wheel alignment process and adjustments will be addressed. Service procedures for manual, power, and electric steering systems will be covered. Lab experiences will provide an opportunity to service a variety of vehicles. (Prerequisites: None) (Co-requisites: AUTO 1000, AUTO 1010, and AUTO 1167)

AUTO 2159 Brake Systems & Service, 4 credits
This course covers the operational theory and repair of automotive brakes and braking systems; principles of hydraulics, disc, drum, and

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parking brake systems; and Anti-lock Brake Systems (ABS) and Traction Control (TC) basics. Lab experiences will provide an opportunity to service a variety of vehicles and systems. (Prerequisites: None) (Co-requisites: AUTO 1000, AUTO 1010, AUTO 1167, and AUTO 2145)

AUTO 2164 Chassis Electrical System, 3 credits
This course emphasizes the description, operation, diagnosis, and service procedures related to chassis electrical systems. This includes vehicle lighting, instrumentation, windshield wipers and washers, power door locks, windows, and mirrors as well as passive restraint systems. Major vehicle accessories and body control module integration and operation will also be covered. Finally, electrical circuit repairs and the understanding and interpreting of electrical system service information and schematics will be addressed. (Prerequisites: AUTO 1000, AUTO 1010, and AUTO 1167)

AUTO 2166 Starting & Charging Systems, 2 credits
The description, operation, diagnosis, and service procedures related to automotive batteries will be addressed. The description, operation, diagnosis, and various service procedures related to automotive cranking motors and charging systems will be covered. Also included are descriptions of the various circuits used to control starter motor operation and charging system voltage regulation. Understanding and interpreting electrical system service information and schematics will also be addressed. (Prerequisites: AUTO 1000, AUTO 1010, and AUTO 1167)

AUTO 2175 Automotive Climate Control & Service, 4 credits
This course covers the principles of automotive heating, ventilation and air conditioning (HVAC) and the fundamental service procedures used to repair and maintain those systems. As part of this course, students should be able to successfully complete the Automotive Service Excellence (ASE) Refrigerant Recovery and Recycling Certification Program in order to meet the EPA regulations and requirements, which are detailed in section 609 of the Clean Air Act of 1990. Lab experience provide the opportunity to diagnose, repair, and service vehicles. (Prerequisites: AUTO 1000, AUTO 1010, and AUTO 1167)

AUTO 2183 Fuel & Ignition Management Systems & Service, 6 credits
This course covers the description, operation, diagnosis, and service procedures related to automotive fuel, emission, and ignition systems and the interaction of these systems. The history and evolution of these vehicle systems will be addressed to provide a path to understand the technology currently in use. The automobile industries impact on emissions and the technology changes undergone to reduce these emissions is also addressed. Computer controls of these systems will be covered in detail as will the understanding and interpreting of driveability related service information, procedures, and schematics. (Prerequisites: AUTO 1000, AUTO 1010, and AUTO 1167)

AUTO 2187 Automotive Computer Systems & Driveability, 4 credits
This course covers the theory and operating principles of automotive computer systems. Topics may include but are not limited to: On Board Diagnostics (OBD), scan tool usage, input sensors, and computer controlled driveability systems. Lab experiences provide the opportunity to service vehicles. (Prerequisites: AUTO 1010 and AUTO 1167)

AUTO 2450 Fundamental Welding for Automotive, 3 credits
This course focuses on the knowledge and hand skills needed to proficient in the processes of plasma cutting, and oxy-fuel heating and cutting. This course covers hands-on training with the Gas Metal Arc Welding (GMAW) process, using short circuit transfer on carbon steels in all positions. Safety requirements covered. (Prerequisites: None)

Biology

BIOL 1106 (MnTC 2, 3) Principles of Biology, 4 credits
Biological scientific inquiry and methodology will be taught within a laboratory and lecture context. Cell biology topics will emphasize cell structure, function, and the biochemical processes of respiration, metabolism, and photosynthesis. The study of heredity and genetics will focus on the Mendelian genetics and the molecular basis of inheritance, DNA, RNA, mitosis, and meiosis. Other topics include mechanisms and processes of evolution and current societal issues and breakthroughs in biology. (Prerequisites: READ 0900 or appropriate placement score) (MN Transfer Goals 2, 3) (3 Credits Lecture/1 Credit Lab)

BIOL 1130 (MnTC 2, 3) Human Biology, 4 credits
This course covers the basic principles of the organization, structures, and functions of the human body. Topics include: general biological theories; anatomical of each body system; basic physiological process and maintenance of homeostasis; human genetics and inheritance principles and their relation to evolution; and connections between the human body, societal issues, and disease. Student will make observations and analyze data related to the human body through laboratory exercises. (Prerequisites: READ 0900 or appropriate placement score) (MN Transfer Goals 2,3)

BIOL 2100 (MnTC 2, 3) Anatomy & Physiology I, 4 credits
Anatomy & Physiology I (A&P I) is a course designed to prepare students for advanced coursework required for health or allied healthcare educational pathways. This course emphasizes the anatomical and physiological organization and interrelationships of the major systems that comprise the human body. Building from the knowledge gained in Biology 1106, A&P I will focus mainly on the following systems: integumentary, musculoskeletal, nervous, endocrine, and sensory. Laboratory dissection, experiments, and computer- assisted instruction will provide students with the necessary foundation of knowledge required for successful transition into A&P II. (Prerequisites: BIOL 1106) (3 Credits Lecture/1 Credit Lab)

BIOL 2200 (MnTC 2, 3) Anatomy & Physiology II, 4 credits
Anatomy & Physiology II is a course that builds on the foundation of Anatomy & Physiology I to prepare students for advanced coursework required for Nursing and other Allied Health Care Programs. This course continues to examine the human body from an anatomical and physiological examination of the I systems: digestive, urinary, respiratory, circulatory, immune, and reproduction. Students will gain a comprehensive understanding of human gross anatomy by participating in animal dissection, lab experiments, and computer-assisted instruction, while examining the interrelationships of the physiology that drives the human body. (Prerequisites: BIOL 2100) (3 Credits Lecture/1 Credit Lab)

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BIOL 2106 (MnTC 2, 3) Microbiology, 4 credits
Microbiology is a science course designed to prepare students with a working knowledge of how microorganisms affect our daily life. Emphasis will be placed on the study of prokaryotic and eukaryotic microorganisms including bacteria, viruses, fungi, and other life forms. The study of growth, metabolism, reproduction, evolution and ecology of microorganisms will help the student to understand host-pathogen interactions, pathogenesis of disease, and immunological response. Microbiology research articles and case studies will be utilized to provide students with relevance into how microbes are used in such fields as Agriculture, Food Science, Horticulture, Nursing/Healthcare, Pharmacology, Biomedical Technology and National Security (i.e. Bioterrorism). (Prerequisites: BIOL 1106) (3 Credits Lecture/1 Credit Lab)

Biomedical Equipment Technician

BMET 1200 Biomedical Equipment and Terminology, 2 credits
This course will cover test equipment used in the biomedical field. Electrical safety analyzers, defibrillator analyzers, and vital signs patient simulators will be demonstrated throughout the course. Terminology used in the biomedical field will be covered. (Prerequisite: ETEC 1202)

BMET 1301 Biomedical Networking, 2 credits
This course covers networking fundamentals for electronic engineering technicians and biomedical equipment technicians. Topics such as network layers, protocols, media, security, hardware, setup, and troubleshooting will be covered. The course introduces the safety, regulatory, and security requirements specific to networking mechatronic and biomedical equipment. (Prerequisites: ETEC 1151)

BMET 2012 Biomedical Instrumentation, 4 credits
This course covers theory and operations of medical test equipment. The course will introduce test and measurement equipment used for preventive maintenance, diagnosis and repair of medical equipment. A variety of biomedical transducers will be introduced. IEC 62353 (International Electroctechnical Commission) standards for electrical safety testing of medical devices will be discussed throughout the course. (Prerequisites: ETEC 1201)

Construction Estimating

CEST 1000 Construction Estimating I, 3 credits
The beginning responsibility of a construction estimator is preparing quantity takeoffs. This course will cover preparing quantity takeoffs for remodeling and new residential construction. The student will also be introduced to the use of cost guides. (Prerequisites: None)

CEST 1010 Construction Estimating II, 3 credits
This is continuation of CEST 1000 Construction Estimating I. This course will begin to focus on light commercial construction take off estimates. The student will continue to use cost guides and begin producing construction schedules. (Prerequisites: CEST 1000)

CEST 1020 Computer Estimating, 2 credits
The use of computer estimating software will be important to the construction estimator. Students will be using the most current industry based computer estimating software. (Prerequisites: CEST 1000)

CEST 1030 Project Management for Estimators, 2 credits
Project management is a necessary skill for the entry level construction estimator to advance in industry. The course will focus on scheduling and budgeting processes used during construction. The coordination and organization of necessary paperwork will also be emphasized. (Prerequisites: None)

Communications

COMM 1050 (MnTC 1, 2) Strengths and Wellness, 2 credits
This seminar will introduce students to their unique talents, and help them discover how best to use and develop talents in academics, career and life. Students will explore career paths, motivation, and examine personal strengths using StrengthsQuest tool and learn to develop life skills using the Five Essential Elements of Well-Being. This course is designed to provide meaningful and relevant information to promote academic and life success. The course will benefit all learners. (Prerequisites: None)

COMM 1055 (MnTC 1, 2) Strengths and Wellness, 3 credits
This course will introduce students to their unique talents, and help them discover how best to use and develop talents in academics, career, and life. Students will explore career paths, motivation, and personal strengths using the StrengthsFinder or StrengthsQuest tool, and learn to develop life skills using the Five Essential Elements of Well-Being. This course is designed to provide meaningful and relevant information to promote academic and life success. (Prerequisites: None)

Computer Technology

COMP 1002 Computer Technologies for Communication, 2 credits
This course is designed for students with little or no computer experience. In this course students will learn how to use a variety of technologies to communicate with others. Included setting up and using e-mail accounts, word processing, presentation graphics, and spreadsheet development. Topics such as data privacy and the impact of information technology on society will be addressed. (Prerequisites: None)

Occupational Therapy Assistant

COTA 1001 Introduction to Occupational Therapy, 4 credits
This course is an introduction to the foundational concepts encompassing the scope of occupational therapy (OT) and the OT process. Many foundational concepts are presented such a history, philosophy, and values of the profession. The course also reviews the American Occupational Therapy Association's (AOTA) Practice Framework: Domain and Process in-depth, to help students understand key concepts and terminology. Service delivery models, practice settings, intra/inter professional roles are also explored. Key components of the profession such as therapeutic use of self, interviewing skills, ethics, diversity, roles of the Occupational Therapy Assistant (OTA), professional resources, and regulatory issues are also covered. (Prerequisites: None; Co-requisites: COTA1105, COTA1050, HLTH1005.) This course is restricted to the following major: Occupational Therapy Assistant Program.)

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COTA 1050 Clinical Conditions, 4 credits
This course is a foundational course within the Occupational Therapy Assistant (OTA) Program that provides basic information regarding a variety of physical, developmental, and psychosocial conditions most commonly treated within Occupational Therapy (OT) practice. The following topics are addressed for each condition: etiology, prevalence, symptoms, disease course, prognosis, precautions/contraindications, medical terminology, definitions, and abbreviations. The role of OT in treatment and how the condition may impact performance in occupation is covered. (Prerequisites: None; Co-requisites: COTA 1001, COTA 1105, HLTH 1005.) This course is restricted to the following major, Occupational Therapy Assistant Program.

COTA 1105 Therapeutic Applications I, 3 credits
Therapeutic Applications I works collaboratively with Intro to Occupational Therapy (OT), building on Occupational Therapy Practice Framework (OTPF) terminology. This course provides skills for activity analysis through the various OT domains and across the lifespan. Historical use of crafts in Occupational Therapy, the process of activity analysis, and the teaching and learning process in relation to client interaction is covered. Professional attributes and student strengths are introduced and assessed. Concepts of grading, adapting activities, and applying these to clinical scenarios are introduced. (Prerequisites: None; Co-requisites: COTA 1001, COTA 1050, HLTH 1005.) This course is restricted to the following Major: Occupational Therapy Assistant Program.

COTA 1155 Therapeutic Applications II, 2 credits
This course includes topics and skills that practitioners use regardless of practice setting such as group dynamics, including roles of group members and how to conduct a variety of group types. This course addresses documentation skills, including types, formats, electronic health records, and confidentiality. Evidence-Based Practice (EBP) skills are also addressed, including frames of reference, using professional resources, types of research, how to use statistics, and how to plan and provide rationale for treatment using EBP. (Prerequisite: COTA 1001; Co-requisites: 1280. This course is restricted to the following major, Occupational Therapy Assistant.)

COTA 1260 Performance Skills and Applications, 3 credits
This course expands on knowledge presented in Introduction to Occupational Therapy (OT), teaching specific skills, basic standardized assessments, and frames of reference related to performance areas of motor, process, and social interaction. In relation to motor skills, the following areas are addressed: kinesiology, range of motion, coordination, strength, use of goniometer measurements, transfer, energy conservation/work simplification, and basic assessments. In relation to process and sensory skills, basic assessments and interventions for each area are addressed. In relation to social interaction skills, interviewing skills, therapeutic use of self, and therapeutic listening are addressed. (Prerequisite: COTA 1001; Co-requisites: COTA 1280. This course is restricted to the following major, Occupational Therapy Assistant.)

COTA 1270 Productive Aging and Geriatric Practice, 4 credits
This client-centered occupation-based course focuses on all aspects of the occupational therapy (OT) process for older adults who may have health conditions leading to performance skill deficits. The course also addresses productive aging by accentuating maintenance of health and wellness through health promotion and prevention intervention. Emphasis is on the role of the Occupational Therapy Assistant (OTA) both in direct OT service as well as within an Activities/Recreation Department, service delivery models, frames of reference, evidence-based practice (EBP), and documentation within this area of practice. During labs, the focus is on skills related to assessment outcomes and developing intervention techniques using creativity and clinical reasoning skills to meet client outcomes. Reflection, self-assessment of skills, and strengths will be applied to course content. (Prerequisites: COTA 1001. Co-requisite: 1280. This course is restricted to the following major, Occupational Therapy Assistant.)

COTA 1280 Mental Health and Wellness Practice, 5 credits
This client-centered occupation-based course focuses on all aspects of the occupational therapy (OT) process for adults who have mental health conditions leading to performance skill deficits. Emphasis is on the role of the Occupational Therapy Assistant (OTA), service delivery models, frames of reference, evidence-based practice (EBP), and documentation within this area of practice. During labs, the focus is on skills related to assessment outcomes and developing intervention techniques using creativity and clinical reasoning skills to meet client outcomes. Reflecting, self-assessment of skills, and strengths will be applied to course content. (Prerequisites: COTA 1001. CO-requisites COTA 1155, COTA 1260, COTA 1270, COTA 1290, and PSYC 1406. This course is restricted to the following major, Occupational Therapy Assistant.)

COTA 1290 Level I Fieldwork Behavioral, 1 credit
This course is supervised occupational experience at an assigned fieldwork site. The student will have the opportunity to interact with individuals who have various physical, metal, emotional/behavioral, developmental, and cognitive disabilities. Opportunities to develop observation, communication, and critical thing skills will be provided. Observation and participation in the overall program and/or delivery of services within the occupational therapy (OT) domain will also be covered. The fieldwork experience coincides with the content related to mental health/wellness and geriatric practice. (Prerequisites: COTA 1001; and current certification in CPR for the healthcare worker. Co-requisites: COTA 1270, COTA 1280. This course is restricted to the following major, Occupational Therapy Assistant.)

COTA 2310 Professional Seminar, 2 credits
This course covers fieldwork preparation and employment preparation. The course will also address professional attributes, ethics, employment preparation, certification, licensing, supervision guidelines, professional socialization, and mentoring. (Prerequisite: COTA 1280. Co-requisite: COTA 2330. This course is restricted to the following major, Occupational Therapy Assistant.)

COTA 2330 Physical Rehabilitation Practice, 4 credits
This client-centered occupation-based course focuses on all aspects of the occupational therapy (OT) process for people who may have physical health conditions leading to perform skill deficits. Emphasis is on the role of the Occupational Therapy Assistant (OTA) in direct OT service, service delivery models, frames of reference, evidence-based

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practice (EBP), and documentation. During labs, the focus is on skills related to assessment outcomes and developing intervention techniques using creativity and clinical reasoning skills to meet client outcomes. Reflection, self-assessment of skills, and strengths will be applied to course content. (Prerequisites: COTA 1280, PSYC 1406, PSYC 1506, ENGL 1107 or 2105, SPCH 1200 or 1500, HLTH 1005. Co-requisites: COTA 2310, COTA 2340, COTA 2350, COTA 2390. This course is restricted tot the following major, Occupational Therapy Assistant.)

COTA 2340 Children and Youth Practice, 4 credits

This client-centered occupation-based course focuses on all aspects of the occupational therapy (OT) process for children and youth who may have health and/or developmental conditions leading to performance skills deficits. Emphasis is on the role of the Occupational Therapy Assistant (OTA) in direct OT service, service delivery models, frames of reference, evidence-based practice (EBP), and documentation. During labs, the focus is on skills related to assessment outcomes and developing intervention techniques using creativity and clinical reasoning skills to meet client outcomes. Reflection, self-assessment of skills, and strengths will be applied to course content. (Prerequisite: COTA 1280; Co-requisite: COTA 2330. This course is restricted to the following major, Occupational Therapy Assistant)

COTA 2350 Community Practice, 4 credits

This client-centered occupation-based course focuses on all aspects of the occupational therapy (OT) process for clients who may be at risk for developing or may have conditions that affect occupational performance. The course also addressed productive living by maintaining health and wellness through health promotion and prevention intervention. Emphasis is on the role of the Occupational Therapy Assistant (OTA) both in direct OT service as well as within a community-based setting, service delivery models, frames of reference, evidence-based practice (EBP), and documentation. During labs, the focus is on skills related to assessment outcomes and developing intervention techniques using creativity and clinical reasoning skills to meet client outcomes. Application of concepts will culminate in lab through program development and lead in community settings. Reflection, self-assessment of skills, and strengths will be applied to course content. (Prerequisite: COTA 1280; Co-requisite: COTA 2330. This course is restricted to the following major, Occupational Therapy Assistant)

COTA 2390 Level I Fieldwork Traditional, 1 credit

This course is a supervised occupational experience at an assigned fieldwork site. The student will have the opportunity to interact with individuals who have various physical, mental, emotional/behavioral, developmental, and cognitive disabilities in practice settings supervised by an occupational therapy practitioner. Opportunities to develop observation, communication, and critical thinking skills will be provided. Observation and participation in the overall program and/or delivery of services within the occupational therapy (OT) domain will also be covered. The fieldwork experience coincides with content related to the following practice areas: mental health and wellness, productive aging/geriatrics, physical rehabilitation, and children and youth. (Prerequisites: COTA 1280, COTA 1290, COTA 1270; Co-requisite: COTA 2330. A current certification in CPR for the healthcare worker. This course is restricted to the following major, Occupational Therapy Assistant)

COTA 2410 Level II Fieldwork in Psychosocial Setting, 6 credits

A supervised Level II Fieldwork experience in a psychosocial setting. This is an eight-week full-time experience. Supervision is by a registered occupational therapist and/or certified occupational therapy assistant. Emphasis is placed on developing the skills/responsibilities expected of an entry-level occupational therapy assistant. The student must have a current CPR for the healthcare worker card. (Prerequisites: PSYC 1605, COTA 1370, COTA 2010, COTA 2011, COTA 2200, and COTA 2255) (Co- requisites: COTA 2420 and COTA 2450)

COTA 2411 Level II Fieldwork A, 6 credits

This is an eight-week full-time experience, which is a supervised Level II Fieldwork experience either in a medical or community setting. Supervision is provided by a registered occupational therapist and/or certified occupational therapy assistant. Emphasis is placed on developing the skills/responsibilities expected of a competent entry-level occupational therapy assistant. Competent entry-level skills consist of the ability to make clinical applications, demonstrate professional attributes, observe, communicate, and interact with clients, families and staff, document skilled services, participate in the occupational therapy (OT) process within the domain of OT, and demonstrate safety. (Prerequisites: COTA 2330, a current CPR for the healthcare worker card. Co-requisites: COTA 2421. This course is restricted to the following major, Occupational Therapy Assistant).

COTA 2420 Level II Fieldwork in Rehab Setting , 6 credits

A supervised Level II Fieldwork experience in a physical rehabilitation setting. This is an eight-week full- time experience. Supervision is by a registered occupational therapist and/or certified occupational therapy assistant. Emphasis is placed on developing the skills/responsibilities expected of an entry-level occupational therapy assistant. The student must have a current CPR for the healthcare worker card. (Prerequisites: PSYC 1605, COTA 1370, COTA 2010,COTA 2011, COTA 2200, and COTA 2255) (Co-requisites: COTA 2410 and COTA 2450)

COTA 2421 Level II Fieldwork B

This is an eight-week full-time experience, which is supervised Level II Fieldwork experience either in a medical or community setting. This will be a different setting from previous Level II A rotation. Supervision is provided by a registered occupational therapist and/or certified occupational therapy assistant. Emphasis is placed on developing the skills/responsibilities expected of a computer entry-level occupational therapy assistant. Competent entry-level skills consist of the ability to make clinical applications, demonstrate professional attributes, observe, communicate, and interact with clients, families an staff, document skilled services, participate in the occupational therapy (OT) process within the domain of OT, and demonstrate safety. (Prerequisites: COTA 2330; a current CPR for the healthcare worker card. Co-requisite: COTA 2411. This course is restricted to the following major, Occupational Therapy Assistant.)

COTA 2450 Fieldwork Seminar II, 1 credit

Students share their learning experiences from Level II Fieldwork with classmates. Students return to Anoka Technical College for this seminar the last day of each eight week Level II Fieldwork Experience. (Co-requisites: COTA 2410 and COTA 2420)

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Community Social Services

CSS 1010 Direct Service Professionalism, 3 credits
This course provides an overview of the rights and protections of persons with disabilities and prepares the student to work in the direct service setting. Emphasis is placed on teamwork, communication and conflict resolution, working with families as well as diversity, confidentiality and advocacy issues. (Prerequisites: None)

CSS 1020 Physical/Developmental Supports I, 3 credits
This course compares and contrasts the community support models to former medical model. This course will guide the students in obtaining skills on how to support persons with various disabilities and explore augmentative and communication systems. This course will address specific support issues including common signs and symptoms of health concerns, standard precautions and blood borne pathogens, appropriate responses to emergency situations, basic medication concerns, and documentation techniques. In addition, students will learn about communication methods, relationship and sexuality issues, inclusion issues, and community resources for the individuals they will support. (Prerequisites: None)

CSS 1030 Person Centered Planning, 3 credits
This course will outline person centered planning and the utility of this process in translating personal choices, desires and strengths into a support plan. The students will review current laws and rules governing services to persons with disabilities. The student will demonstrate an ability to facilitate a group process using a person- centered approach. (Prerequisites: None)

CSS 1040 Facilitating Positive Behaviors, 3 credits
This course provides an overview of different challenging behaviors and provides methods and guidelines for correcting these behaviors. Additionally, this course explores how environmental factors like personal experiences and individual value systems affect decision making, behaviors, and responses to others actions. This course introduces various assessment tools that can be used to identify challenging behavior, develop intervention plans, and document client progress. (Prerequisites: None)

CSS 1550 Social Service Projects, 3 credits
This course will give students the opportunity to critically examine a social problem, then work as a group to create and implement a program that addresses the problem. Students will gain knowledge in assessing the problem, researching, designing, implementing and evaluating the chosen intervention. Group process learning will be utilized. Before beginning the group project, students will receive an overview of group learning principles and interpersonal skills required for effective participation in this project. (Prerequisites: None)

CSS 1560 Social Welfare Services, 3 credits
This course will discuss the history of social welfare as an institution. Various social problems will be examined and discussed in terms of at-risk populations, societal norms and values, and how policy is developed to address these problems. (Prerequisites: None)

CSS 1570 Introduction to Social Work, 3 credits
This course will orient the student to the field of social work. An understanding of people as individuals and members of groups and communities using the Person-In Environment (PIE) approach will be introduced. Generic roles emphasizing change and responsibility are explored and identified. Major topics include: history of social work professional value assumptions, nature of social work relationship, and social work settings: casework, family and group work, advocacy, public and social welfare administration, and community development. The history of the profession, including influential social workers and the social conditions which lead to early social work movements, will be covered. Students will identify and practice the skills necessary for generalist social work practice. (Prerequisites: CSS 1010, CSS 1020, CSS 1030, and CSS 1040)

CSS 2020 Physical/Developmental Supports II, 3 credits
This course covers specific types of developmental, physical and mental disabilities including cerebral palsy, autism, mental retardation, epilepsy, Prader Willi, chromosomal disorders, deafness/hard of hearing, blindness, brain injury and mental health diagnoses. The course will guide the student in obtaining skills on how to support persons with these various disabilities. (Prerequisites: CSS 1020)

CSS 2050 Supportive Interventions, 4 credits
This course provides in-depth analysis of assessment, plan design, implementation and evaluation. The course will cover assessing problem behavior, planning and implement interventions, design proactive manipulations and integrating a multi-intervention, multi-disciplinary team approach. The course will provide the additional groundwork to integrate a multiple-intervention, multi-disciplinary team approach to client behavior management. The course will also explore the understanding of regulatory restrictions and guidelines on intervention and Rule 40, mental health issues sometimes associated with behavior, psychotropic medications and crisis intervention. (Prerequisites: CSS 1010, CSS 1020, CSS 1030, and CSS 1040)

CSS 2100 CSS Internship, 4 credits
This course includes 180 hours of supervised work-site experience and 12 hours of class time to discuss the integration of knowledge and skills. Discussion topics include recognizing trends in the development disability field, identifying characteristics of special populations and analyzing the impact of the work environment on worker-client relationships. (Prerequisites: Program advisor approval)

Construction Electrician

ELEC 1001 Electrical Theory I, 5 credits
This course covers the basic concepts of electricity and basic circuits. Included are a basic study of resistance, conductors and insulators, current and voltage sources, voltage drops, Ohm's Law, power, series circuit construction and analysis, parallel circuit construction and analysis, series-parallel circuit construction and analysis, magnetism, instrument usage, circuit theorems, and terminology. This course includes lab time to prove and reinforce learned electrical concepts. This course is a component of the Minnesota Department of Labor and Industry Electrical ACT Two-year Technical Program Experience Credit Rules. (Prerequisites: None)

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ELEC 1020 Residential Wiring Lab I, 4 credits
This hands-on lab course is designed to give students the practical application and installation experience needed to install electrical materials, apparatus, and circuits necessary and required in residential construction. All installations are based on the current edition of the National Electric Code and local accepted wiring standards or practices. Proper usage of equipment, hand and power tools, and safety practices will be covered. Hand tools will need to be purchased. This course is a component of the Minnesota Department of Labor and Industry Electrical ACT Two-year Technical Program Experience Credit Rules. (Prerequisites: None)

ELEC 1030 National Electrical Code I, 2 credits
The National Electrical Code is the statewide basis for electrical installations, for inspections, and license examinations. Introductions to the code, how the code book is constructed, who determines its contents, and how to use the code book when installing electrical circuits are covered in this course. This course is a component of the Minnesota Department of Labor and Industry Electrical ACT Two-year Technical Program Experience Credit Rules. (Prerequisites: None)

ELEC 1061 Electrical Theory II, 5 credits
This course continues the basic concepts of electricity and alternating current (AC) circuits. Included are studies of magnetic induction; single phase generation; resistance in single phase AC series, parallel, and combination circuits; capacitance in single phase AC series, parallel, and combination circuits; inductance in single phase AC series, parallel, and combination circuits; phase relationships; power quality issues including power factor and harmonics; instrument usage and terminology. This course includes lab time to prove and reinforce learned electrical concepts. This course is a component of the Minnesota Department of Labor and Industry Electrical ACT Two-year Technical Program Experience Credit Rules. (Prerequisites: ELEC 1001, MATH 1400 with a "C" or better grade)

ELEC 1080 Residential Wiring Lab II, 4 credits
This hands-on lab course is designed to give students the practical application and installation experience needed to install electrical materials, apparatus, and circuits necessary and required in residential construction. All installations are based on the current edition of the National Electric Code and local accepted wiring standards or practices. Proper usage of equipment, hand and power tools, and safety practices will be covered. This course is a component of the Minnesota Department of Labor and Industry Electrical ACT Two- year Technical Program Experience Credit Rules. (Prerequisites: ELEC 1020 and ELEC 1030)

ELEC 1090 National Electrical Code II, 3 credits
This course is a continuation of ELEC1030 National Electrical Code I with an emphasis on the study of branch circuits, feeders, branch circuit and feeder calculations, services, overcurrent protection, and grounding. (Prerequisites: ELEC 1030)

ELEC 1101 Power Limited, 2 credits
This course covers the general procedures for installing and terminating voice, data, fire alarm, and signaling cables with a structured cabling approach. Emphasis will be placed on the various types and ratings of common low-voltage cable, as well as fiber optic cable used for non power-limited or power-limited circuits. National Electrical Code (NEC) articles that pertain to these areas will also be studied. This course is a component of the Minnesota Department of Labor and Industry Electrical ACT Two-year Technical Program Experience Credit Rules. (Prerequisites: None)

ELEC 1107 PLC's & Electronics for Electricians, 6 credits
PLC's and Electronics for Electricians is an introductory lab course combining programming and operating Allen- Bradley modular Small Logic Controller (SLC) 500 and Allen Bradley MicroLogix 1000 fixed controllers, with an introductory classroom/lab course presenting solid state devices circuits and applications commonly found in the electrical industry. The PLC controllers will be programmed and operated using RSLogix 500 programming software. PLC topics include timers, counters, sequencers, subroutines, start- stop- jog stations, and other programmable operations used in basic PLC applications. Students will also learn how to troubleshoot, save, document, and print out a hard copy of their programs. Basic fundamentals and applications of solid state devices such as diodes, transistors, silicon controlled rectifiers (SCR's) and triacs are covered in theory as well as analyzed in the lab. The lab emphasizes device terminology and component identification. The students will learn when and how to use various test equipment including multi-meters and oscilloscopes, to take measurements and apply troubleshooting techniques on the circuits they build. This course is a component of the Minnesota Department of Labor and Industry Two- Year year technical program experience rules. (Prerequisites: ELEC 1061 and ELEC 2020, or equivalent)

ELEC 1110 Lighting, 2 credits
This course covers lighting terminology and the principles of light and sight. It will cover incandescent, fluorescent, and HID lighting luminaires and lamps. Luminaire installations and light distribution are covered as well as code requirements for lighting and luminaires. This course is a component of the Minnesota Department of Labor and Industry Electrical ACT Two- year Technical Program Experience Credit Rules. (Prerequisites: None)

ELEC 1121 Electrical Heating and Air Conditioning, 2 credits
This course covers the principals and terminology of heating and cooling systems found in residential and commercial buildings. It also will cover control systems and schematic diagrams for heating and cooling. (Prerequisites: None)

ELEC 1130 Plan Reading, 2 credits
This course covers the basic analysis of construction methods and design. Included are the studies of interpreting prints, specifications and construction materials. This course is a component of the Minnesota Department of Labor and Industry Electrical ACT Two- year Technical Program Experience Credit Rules. (Prerequisites: None)

ELEC 1140 Safety Principles/OSHA I , 1 credit
This course covers occupational safety and health practices that are common to labor industries and presents information on how to develop a personal strategy to help avoid unsafe practices. An overview of OSHA and a review of OSHA safety requirements for general industry and construction sites will be presented. This course is a component of the Minnesota Department of Labor and Industry Two-Year year technical program experience rules. (Prerequisites: None)

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ELEC 1141 Safety/OSHA II, 2 credits
This course covers occupational safety and health practices that are common to labor industries and presents information on how to develop a personal strategy to help avoid unsafe practices. An overview of OSHA and a review of OSHA safety requirements for general industry and construction sites will be presented. (Prerequisites: ELEC 1140)

ELEC 2010 Commercial Wiring Lab I, 3 credits
This lab course is planned to give the students some practical application and practice of wiring installations normally found in commercial buildings. This course is taught in conjunction with ELEC2030 National Electrical Code III. (Prerequisites: ELEC 1090)

ELEC 2020 Motors & Controls, 2 credits
This Motors and Controls course is intended to provide an introductory study of the fundamental theory and operation of electric motors, motor controllers, and motor control circuits. The course will include study of mechanical limit switches, relays, magnetic motor starters, motor overloads, symbols, and control ladder diagrams. Motor and motor starter installation, wiring, motor connections, and troubleshooting will also be covered for common motor control circuits. This course fulfills the Minnesota Department of Labor and Industry 2-year technical program experience credit rules 3800.3825, subp. 2 technical content for motors, motor controls, electronic controls, test equipment and troubleshooting. (Prerequisites: ELEC 1061 and ELEC 1090)

ELEC 2030 National Electrical Code III , 3 credits
This course is a continuation of ELEC1090 National Electrical Code II with an emphasis on grounding electrical services and equipment, bonding services and equipment, overcurrent protective devices, outlet boxes, appliances, and cable and conduit wiring methods. (Prerequisites: ELEC 1090)

ELEC 2040 Three-Phase Electrical Theory, 4 credits
This is a continuation of ELEC1061 providing a review of single-phase circuits and a study of delta and wye polyphase circuits, concepts of transformer operation, connections, calculations, installation, and maintenance procedures. This course is a component of the Minnesota Department of Labor and Industry Two-Year year technical program experience rules. (Prerequisites: ELEC 1061)

ELEC 2060 Commercial Wiring Lab II, 3 credits
This course is a continuation of ELEC 2010 Commercial Wiring Lab I and is designed to give students exposure and practice with methods used in commercial and industrial wiring. This course is taught in conjunction with ELEC 2080 National Electrical Code IV. This course is a component of the Minnesota Department of Labor and Industry Electrical ACT Two-year Technical Program Experience Credit Rules. (Prerequisites: ELEC 2010)

ELEC 2071 Motors and Controls II, 3 credits
This Motors and Controls course is a continuation of ELEC2020 Motors and Controls I, and is intended to develop a fundamental understanding of electric motor control methods and techniques common in the electrical industry. This course will include study of electronic controls, time delay sequence control, interlocking circuits, reduced voltage starting, and troubleshooting process controls. This course will

also include the study of Variable Frequency Drive (VFD) fundamental installation and operation. This course is a component of the Minnesota Department of Labor and Industry 2-year technical program experience credit rules. (Prerequisites: ELEC 2020 and ELEC 2040)

ELEC 2080 National Electrical Code IV, 2 credits
This course is a continuation of ELEC2030 National Electrical Code III and is a study of commercial and industrial wiring code applications. (Prerequisites: ELEC 2030)

Emergency Medical Services

EMED 1076 BLS for the Health Care Provider, 1 credit
This course includes First Aid and Cardiopulmonary Resuscitation (CPR) for the Adult, Child, and Infant. This course is taught with National Safety Council and current American Heart Association guidelines. Alternative CPR delivery models will be covered. This course fulfills the requirements for health care programs including Practical Nursing, Medical Assistant, as well as students in various other programs. Upon successful completion, participants will receive an American Heart Association Basic Life Support (BLS) for the Healthcare Provider card. (Prerequisites: None)

EMED 1113 Emergency Medical Technician 1, 4 credit
Course content includes materials included in the most current Emergency Medical Services (EMS) Educational Standards appropriate for the Emergency Medical Technician (EMT) and utilizes more current principles as needed. The EMT course is an assessment-based education utilizing cognitive knowledge attained applied to real-life situations. The EMT course provides preparation in prehospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Major topic areas covered include introduction to EMS, roles and responsibilities of an EMS provider, medical terminology, and pathophysiology of disease. In addition, patient assessment will be introduced. Upon successful completion of this course, students will be eligible to take Emergency Medical Technician- 2, and will be eligible to apply for certification as an Emergency Medical Responder (EMR) in Minnesota and will receive the American Heart Association-Basic Life Support. (Prerequisite: None; Co-requisites: EMED 1114)

EMED 1114 Emergency Medical Technician 2, 5 credit
Course content materials include the most current Emergency Medical Services (EMS) Educational Standards appropriate for the Emergency Medical Technician (EMT) and utilizes more current principles as needed. The EMT course is an assessment-based education utilizing cognitive knowledge attained applied to real-life situations. The EMT course provides preparation in prehospital assessment and care for patients of all ages with a variety of medical and trauma assessment, understanding the kinematics of trauma, functioning in a multiple casualty event, and working with special populations. Upon successful completion of this course, students will be eligible to take the National Registry of Emergency Medical Technician (NREMT)- EMT Basic psychomotor and cognitive exams. (Prerequisites: None; Co-requisites: EMED 1113)

EMED 1120 ECG Recognition and Treatment for EMS, 1 credit
Introductory course focusing on cardiac anatomy and physiology; Electrocardiogram (ECG) lead placement; ECG rhythm interpretation;

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and overview of potential patient presentation among different ECG rhythms. (Prerequisites: MN EMT or admission into Health Program. Co-requisites: EMED 1125, EMED 1130, and EMED 1135)

EMED 1125 EMS Operations, 2 credit
This course is designed to enhance the Emergency Medical Technician's (EMT) skills in advanced procedures and assessment. Skills learned in this class will allow students to assist paramedics on Advanced Life Support (ALS) calls. Course covers critical thinking, prioritization, use of effective communication skills, and the assistance in performing potentially life-saving interventions in stressful environments. Course covers the gaining of understanding in the development and deployment of Emergency Medical Systems (EMS) systems and basic ALS pharmacology commonly used. (Prerequisites: MN EMT Co-requisites: EMED 1120, EMED 1130, and EMED 1135)

EMED 1130 ALS Clinical, 2 credits
Ride a minimum of 96 hours in an Advanced Life Support (ALS) ambulance. Assist paramedics in performance of ALS skills and assessment while refining Basic Life Support (BLS) assessments and skills. (Prerequisites: MN EMT Co-requisites: EMED 1120, EMED 1125, EMED 1135)

EMED 1135 Basic Pharmacology for EMS, 1 credits
This is an introductory course focusing on pharmacologic principles including introduction to dosage calculations and medications commonly used in Advanced Life Support (ALS) ambulances. Assisting and supporting a paramedic to safely administer medications through a variety of routes will also be covered. (Prerequisites: MN EMT Co-requisites: EMED 1125, EMED 1130, and EMED 1120)

English

ENGL 0102 Fundamentals of English, 4 credits
This course offers the opportunity to study and review English grammar and punctuation; develop fluency; organize ideas; and write paragraphs and short essays, as well as edit for grammar, punctuation, and spelling. The course will introduce the practice of composition as a process of writing and revising, rather than as a one-time act. Revision exercises will allow students the chance to demonstrate improvement after receiving specific instructor and peer feedback. The activities in this class will include grammar instruction; workbook and online editing exercises to practice grammar skills; class discussions of topics; and exercises to assist in determining a thesis for an essay, organizing a first draft, developing support for the main idea, composing an essay, writing in rhetorical modes, proofreading, and using basic citation skills. This course will emphasize creating formatted documents using the appropriate software and to interacting with the instructor and peers via the colleges online learning platform. (Prerequisites: A score of 40 on the Accuplacer Reading Comprehension.)

ENGL 0960 Preparing for College Writing, 2 credits
This course focuses on the writing skills necessary to succeed in college writing. Students will employ the writing process to generate thesis-focused, unified, multi-paragraph essays. Student will develop and organize ideas into coherent paragraphs with identifiable topic sentences and support their claims with correctly cited evidence. Students will

respond to assigned reading and their peers' work, as well as apply editing skills to craft effective grammatical sentences.

A grade of C or higher in this course is required to register for ENGL 1107: Composition, ENGL 1110: Research Project, or ENGL 2105: Business and Technical Writing. (Prerequisites: A score of 66-77 Accuplacer Reading Comprehension. Co-requisites: This course must be taken concurrently with READ 0960. Students may take this course without READ 0960 with instructor permission.)

ENGL 1107 (MnTC 1, 2) Composition I, 4 credits
This introductory course focused on academic writing assignments that involve critical reading, thinking, listening, and writing for a variety of rhetorical purposes and audiences. Students will learn how to develop their ideas; organize rough drafts; respond to peer and instructor feedback; and revise and edit their essays. Students will compile a viable job search portfolio. Each student will also develop a research paper, with sources properly cited in a standard citation format, through a process of discovering, analyzing, and synthesizing information drawn from both print and electronic sources. (Prerequisites: ENGL 0102 or ENGL 0960 and READ 0900 or READ 0960 or 78 on Accuplacer Reading Comprehension or appropriate test scores. Must pass classes with a C or better.) (MN Transfer Goals 1, 2) (4 Credits Lecture/0 Credit Lab)

ENGL 1110 (MnTC 1) Special Topics: Research Project, 1 credit
This course is designed for students who have previously taken a 3-credit freshman-level course at an accredited college. It assumes that the student is already able to compose an essay and understands the basics of writing, including using prewriting strategies; writing a thesis statement; organizing and developing the introduction, body and conclusion of an essay; and using the writing conventions with accuracy. This course will specifically focus on the research paper. In doing so, it will emphasize communication skills, including proper employment of MLA format to document sources, and effective, ethical implementation of technical and information literacy skills. (Prerequisites: ENGL 0102 or ENGL 0960 and READ 0900 or READ 0960 or 78 on Accuplacer Reading Comprehension or appropriate test scores. Must pass classes with a C or better.) (MN Transfer Goal 1)

ENGL 1150 (MnTC 2, 6, 7) Multicultural Literature, 4 credits
This course introduces students to important literary contributions of writers from a variety of ethnic and cultural backgrounds, focusing on critical reading and discussion; the elements of literature; and analysis, interpretation and evaluation, in minority and immigrant literature of the United States. Coursework will include short essays, peer-review work, and a longer researched essay using MLA citation format. Students will first write about their own cultural heritage, and then study several significant and representative multicultural works. This course will explore the global origins of people who make up United States society; the problems and possibilities facing groups based on race, religion, gender, ethnicity, national origin, and social class; and the strategies, struggles, and ingenuity of those who have brought about change. (Prerequisites: None) (4 Credit Lecture/0 Credit Lab)

ENGL 2105 (MnTC 1, 2) Business and Technical Writing, 4 credits
English 2105 is a course designed to help students communicate effec-

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tively in the technology-supported writing environment of the 21st-century workplace. The course teaches the rhetorical principles that help students shape their business writing ethically, for multiple and multi-cultural audiences, in a variety of professional situations. Students will produce effective business letters, emails, memos, researched reports, web sites and collaborative projects in professional contexts. Students will analyze a variety of communication situations and design appropriate responses through tasks that involve problem solving, rhetorical theory, document design, oral presentations, writing teams, and audience awareness. (Prerequisites: ENGL 0102 or ENGL 0960 and READ 0900 or READ 0960 or 78 on Accuplacer Reading Comprehension or appropriate test scores. Must pass classes with a C or better.) (MN Transfer Goals 1, 2)(4 Credits Lecture/0 Credit Lab)

ENGL 2110 (MnTC 6 & 10) Literature and the Environment, 3 credits

This college literature course offers students the opportunity to analyze texts that explore the relationship between humans and their environments. Possible topics include ecocriticism, sustainability, urban nature, the role of the natural world in literary imagination, and eco-literacy, and texts may include works of nonfiction, fiction, poetry, and popular culture. This course will provide experience with critical thinking and literary analysis as students examine perspectives, integrate evidence, and articulate responses through discussions, writings, and other activities. Students will be expected to read and write at the college level. (Prerequisites: None)

Electronic Engineering Technology

ETEC 1102 DC Mechatronics 1 DC, 3 credits

This course will cover electronic principles and passive components. Students will apply Direct Current (DC) concepts in lab, construct circuits, and gain experience with measuring equipment. Course concepts will be applied to troubleshooting mechatronic systems. The lab will emphasize electronic component identification, electronic schematic reading, circuit wiring, measurement, and documentation. (Prerequisites: None) (Co-requisites: ETEC 1130 and ETEC 1140)

ETEC 1111 AC Electrical Theory and Lab, 5 credits

The course will cover analyzing components in series, parallel, and series-parallel AC (Alternating Current) circuits, using meters, function generators, Oscilloscopes, Ohm's Law, Kirchhoff's Laws, and trouble-shooting concepts. The Lab emphasizes electronic component identification, schematic reading, circuit construction and testing, applying AC test and measuring equipment, as well as documentation.
Troubleshooting techniques are implemented in every lab. (Co-requisites: ETEC 1101)

ETEC 1113 Mechatronics 2 AC, 3 credits

This course will cover Alternating Current (AC) electronic principles and passive components. Course concepts will be applied in trouble-shooting mechatronic systems. Lab will emphasize AC signal measurement, electronic component characteristics, schematic reading, circuit construction, and documentation. (Prerequisites: None. Co-requisities: ETEC 1102)

ETEC 1130 Introduction to Electronic Engineering Technology, 2 credits

This course will introduce the broad range of industry careers involving Electronic Engineering Technology. This course will introduce students to engineering software and hardware tools used throughout the program and industry. It will also provide hands-on experience with software-based instrumentation. This course builds a foundation of electronic concepts. (Prerequisites: None)

ETEC 1140 Circuit Analysis, 2 credits

This course covers measuring systems, units, methods, and tools for analyzing electronic circuits. Electronic laws and theorems will be applied in calculating circuit estimates. Component documentation, schematics, and analysis methods such as spreadsheets and circuit simulation will be applied throughout this course. (Prerequisites: None) (Co-requisites: ETEC 1102)

ETEC 1151 Computer Troubleshooting A+, 3 credits

This course covers the analysis and troubleshooting skills required to maintain personal, industrial, and embedded computers. The A+ Certification Exam curriculum, a recognized industry standard for computer technicians, will be introduced. Course lab activities cover the application of computer hardware and operating systems. Each student will build a computer, which they will keep upon completion of the program. (Prerequisites: None)

ETEC 1170 Programmable Logic Controllers, 2 credits

A Programmable Logic Controller (PLC) is a device used widely in industrial automation to control anything from a small self-contained water filter system up to an entire factory production line. This course introduces applying PLCs in automated systems. This course covers the fundamental ladder logic programming using Allen Bradley software and controllers. The increasingly popular international standard IEC programming languages will be introduced, as well as PLCs from other manufacturers. The basics of automation safety, steps in designing and documenting PLC programs, as well as trouble shooting will be covered. This class emphasizes hands on lab work. (Prerequisites: ETEC1250)

ETEC 1202 Solid State Electronic Devices, 5 credits

Solid State Electronic Devices cover both discrete devices, as well as integrated circuits. This course introduces fundamentals of solid state electronic device operation and circuit applications, applying them to constructing and troubleshooting circuits in lab. The lab component emphasizes device identification, circuit wiring and testing, test equipment use, and documentation. Both switching and linear modes of solid state electronic device operation will be explored. Troubleshooting techniques are implemented throughout the course. (Prerequisites: ETEC 1113)

ETEC 1250 Digital I, 3 credits

This course provides an introduction to digital electronics. The emphasis is on the operation, application, and troubleshooting of logic gates. This course also covers Boolean algebra, number system conversion, combinational and sequential logic. Troubleshooting digital circuits is emphasized throughout the course. (Prerequisites: None)

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ETEC 1260 Lasers & Optics, 2 credits
This course introduces laser and optics fundamentals. Optical components and systems are covered, as well as lasers and their industrial applications. This course will emphasize the importance of laser safety, optical alignment, and beam calibration. (Prerequisites: ETEC 1102)

ETEC 1271 Technical Documentation, 3 credits
This course covers technical documentation including writing lab reports, writing operation and service manuals, project cost estimating, project proposals, and media research. Course projects will include writing a small technical manual, documenting circuit operations, and creating project proposals. (Prerequisites: none)

ETEC 1281 Engineering Technology Programming: LabVIEW & C++, 2 credits
This course will introduce the fundamentals of software development and apply this knowledge to LabVIEW and C++ programming. (Prerequisites: ETEC 1102),

ETEC 2010 Basic Wireless Communications, 2 credits
This course teaches the fundamentals of wireless communications including the transmission and reception of electromagnetic signals. Through hands-on labs constructing, analyzing, and troubleshooting wireless circuits, the learner will gain experience with radio frequency (RF) circuits and test equipment. (Prerequisites: ETEC 1300)

ETEC 2011 Machine-to-Machine Wireless Communications, 2 credits
This course covers principles of wireless communication and technology used in Machine-to-Machine communications (M2M). The electromagnetic spectrum, communication bands, communications systems and circuits, antennas and transmissions lines, modulation, noise, and technology used for interconnecting automated systems will be explored. (Prerequisites: ETEC 1201)

ETEC 2138 LabVIEW and Data Acquisition, 4 credits
This course will cover intermediate topics of LabVIEW programming. The learner will create applications to acquire, process, and display real-world data. Programs to monitor temperature and interface software with Data Acquisition (DAQ) hardware will be addressed. (Prerequisite: ETEC 1281)

ETEC 2143 Advanced Programmable Logic Controllers (PLCs), 3 credits
This course covers advanced skills applying Programmable Logic Controllers (PLCs) in automated systems. Advanced ladder logic programming will be covered, and the International Electrotechnical Commission (IEC) 61131 standard programming languages will be introduced. Automation safety and the process of designing PLC programs will be emphasized. (Prerequisites: ETEC 1170)

ETEC 2162 Robotics and Automation Controls, 5 credits
This course covers fundamentals of robotic concepts and applications. Topics include experimenting with microcontrollers, sensors, teach pendants, and servos and stepper motors. Advanced troubleshooting techniques will be integrated throughout the course. (Prerequisites: ETEC 1102, ETEC 1281, ETEC 1170 and ETEC 1250)

ETEC 2172 Mechatronic Capstone Project, 5 credits
In this course, students will create a mechatronics project which requires interfacing software and hardware. The course emphasizes the concept of teamwork, placing students in groups to complete the project. Projects will be presented to the Electronic Engineering Technology Advisory Committee. (Prerequisite: ETEC 2162 and ETEC 2138) (Co-requisite: ETEC 2177)

ETEC 2177 Mechatronic Capstone Design and Documentation, 2 credits
The goal of this course is for designing and documenting the capstone project. Additional goals include creating a project management spreadsheet incorporating the six steps of problem-solving, and presenting the design and documentation at the end of the course to the Electronics Advisory Committee. (Prerequisites: ETEC 2162 and ETEC 2138) (Co-requisites: ETEC 2172)

ETEC 2276 Industrial Networking IOT/M2M, 4 credits
This course covers networking technology for the industrial Internet of Things (IOT) and Machine-to-Machine (M2M) communications. Industrial IOT capable devices, such as Programmable Logic Controllers (PLCs) will be networked with systems for programming, monitoring, data collection, and Human Machine Interface (HMI). The course also covers configuring M2M network devices, network documentation, and troubleshooting industrial networks. (Prerequisites: BMET 1301 and ETEC 1170)

Health Information Technology

HITM 1030 Medical Coding for Scribing, 3 credits
This course is an introduction and overview of medical diagnosis and procedure coding. This course will focus on rules and conventions of coding as well as the chapter-specific guidelines for assignment of principal and additional diagnoses in both inpatient and outpatient settings. The purpose of this course is to provide the medical scribe with an understanding of and familiarity with the requirements of medical coding as used within the electronic health record. (Prerequisites: None)

HITM 1110 Medical Terminology in Health Information, 3 credits
This course is designed to combine the terminology for medications prescribed and for common disease conditions, according to the American Health Information Management Association (AHIMA).
Content includes spelling and usage of word roots, suffixes, prefixes, word analysis, and abbreviations common to the health information professional. This course will also include drug terminology, pharmacological names, drug classifications and the medical uses of medications per body system. (Prerequisites: None)

HITM 1111 Pharmacology for Health Information, 1 credits
This course is designed to complement the terminology for medications prescribed for common disease conditions, according to the American Health Information Management Association (AHIMA). Content includes drug terminology, pharmacology names, drug classifications, and the medical uses of medications. (Prerequisites: None)

HITM 1120 Health Information Technology Practicum I, 3 credits
This is the first of two Health Information Technology (HIT) professional practice experiences. It is designed to provide exposure to practical general training and experiences in health care delivery systems. Topics include basic organization/management of health information in various types of health care organizations and managed care organizations; uses and structure of clinical vocabulary systems; and the impact of external forces on the healthcare industry. The course will offer application activities which reinforce concepts introduced in the classroom and at site visits. This course also includes a career research report and the completion of several review guide exams. (Prerequisites: HITM1221)

HITM 1130 ICD-10-CM Coding, 3 credits
This course is an introduction to the International Classification of Diseases, 10th edition, Clinical Modification (ICD-10-CM). The course will emphasize correct diagnosis coding, utilizing the alphabetic index and tabular listing within the current ICD-10-CM codebook. The course will focus on rules and conventions of ICD-10-CM as well as the chapter-specific guidelines for assignment of principal and additional diagnoses in both inpatient and outpatient settings. (Prerequisites: None)

HITM 1200 Billing and Reimbursement, 2 credits
This course provides an introduction to medical claim form preparation and processing. Topics covered in this course will include: Commercial, managed care and federal insurance plans; the reimbursement systems and prospective payment systems (PPS) used in the healthcare industry; billing processes and procedures; clean claims and denial; the National Correct Coding Initiatives (NCCI); chargemaster maintenance; regulatory guidelines; and reimbursement monitoring and reporting. (Prerequisites: HITM 1221)

HITM 1210 Supervision of Health Information, 3 credits
This course is an introduction to the principles of supervision, communication, and relationships in the management of health information services. Topics covered in this course include leadership, motivation, ergonomics, management concepts, project management concepts, teamwork-building, laws affecting the workforce, and financial management of a department. (Prerequisites: HITM 1221 and HITM 1244)

HITM 1221 Introduction to Health Information Management, 3 credits
This course provides an orientation to the health care delivery system, health records, and the health information profession. The American Health Information Management Association's (AHIMA) educational requirements and code of ethics are also introduced. (Prerequisites: None)

HITM 1230 ICD-10-PCS Coding, 3 credits
This course is an introduction to the International Classification of Diseases, 10th edition, Procedure Classification System (ICD-10-PCS). The course will emphasize correct hospital inpatient procedure coding, utilizing the alphabetic index and tabular listing within the current ICD-10-PCS codebook. The course will focus on rules and conventions of ICD-10-PCS, use of the tables within the index of the codebook, as well as specific guidelines for assignment of principal and additional procedure codes in hospital inpatient settings. (Prerequisites: None)

HITM 1240 CPT Coding, 3 credits
This course introduces the student to classifying procedures and outpatient procedures using the Center of Medicare and Medicaid Services' (CMS) Coding System, with the main focus on Current Procedural Terminology (CPT). The focus is on applying CPT guidelines and principles. Issues relating to reimbursement will also be addressed. (Prerequisites: HITM 1130 and HITM 1230)

HITM 1244 Law and Ethics, 2 credits
This course will focus on the application of ethical and legal principles and standards pertaining to health information management. Topics of study will include: the application of ethical principles; legal issues pertaining to the confidentiality aspect of health information management; regulatory agencies and laws; privacy standards and rules; and the Health Insurance Portability and Accountability Act (HIPPA) in relationship to health information use and disclosure, and legal aspects of the health record, including documentation/retention requirements from various organizations. (Prerequisites: None)

HITM 1245 Concepts of Health Data Registries , 3 credits
This course will focus on the health information technician's role in managing and applying secondary records and databases. Topics of study include: relationship of content, use and structure of health care data and data sets to secondary record systems; pertinent laws and regulations affecting registries; and the effective use, application, collection, arrangement, presentation, and verification of health care data. (Prerequisites: HITM 1221)

HITM 1250 Advanced Coding, 2 credits
This course give additional experience using the principles of the International Classification of Diseases, 10th revision, Clinical Modification (ICD-10-CM); International Classification of Diseases, 10th revision, Procedure Coding System (ICD-10-PCS); and Current Procedural Terminology (CPT) coding to ensure proficiency using patient records and advanced concepts of medical coding. The course adheres to current regulations and established guidelines in assigning medical code designations. Electronic applications and work processes to support clinical classification and medical coding will be emphasized in this course. (Prerequisites: HITM 1240)

HITM 1260 Professional Practice for Coding Specialists, 3 credits
This is an advanced level course providing the student with more hands-on experience with coding from medical records at various health care facilities. Students will be required to travel to various health care facilities within the Metro area. (Prerequisites: HITM 1130, HITM 1230, and HITM 1240)

HITM 1325 Quality and Performance Improvement, 3 credits
This course focuses on the theory, practice and management of performance and quality improvement processes in healthcare organizations. Topics include: performance improvement activities and tools; customer satisfaction; case management; infectious disease control; risk management; quality and safety of patient care; human resources; analysis of performance improvement data; performance improvement

tools; change management; and the accreditation, certification and licensure process. (Prerequisites: HITM 1221)

HITM 2240 Computerized Health Information, 3 credits
This course will focus on current and emerging Health Information Technologies (HIT) topics including data collection, maintenance, retrieval and security. Students will be provided with hands-on exposure to technologies such as master patient indices, retrieval and tracking systems, automated chart deficiencies, voice recognition technologies, image-based storage systems, and project management concepts, all of which are parts of the Electronic Health Record (EHR). (Prerequisites: HITM 1221)

HITM 2245 Health Care Statistics and Data Registries , 3 credits
This course will focus on the managing and applying secondary records and databases for health information. Topics of study include relationship of content, use, and structure of health care data and data sets to secondary record systems; pertinent laws and regulations affecting registries; the compilation/interpretation of various description reports, such as charts, graphs, and tables/healthcare statistics; and the effective use, application, collection, arrangement, presentation, and verification of health care data. (Prerequisites: HITM 1221 and MATH 0801 or assessment score of 71 or higher)

HITM 2260 HIT Professional Practice Experience II, 2 credits
This is the second of two HIT professional practice experiences. It is designed to provide the advanced student with a 90-hour experience external to the college at a health care organization within the Minneapolis/St. Paul metropolitan area. Principles of health information technology are applied through observation, participation, and application of a variety of health information technology functions. Working under the supervision of a qualified health information professional, the student achieves objectives developed and documented by the college that are directly related to the clinical site which the student is assigned to. (Prerequisites: Successful completion of first three semesters of HIT program and instructor permission)

Health/Nursing Assistant

HLTH 1000 Disease Conditions, 2 credits
This course provides basic information about common disease conditions affecting various body systems. Diagnostic tools and treatment options will be presented. In addition, students will learn the basic of medical terminology associated with the disease process. (Prerequisites: None)

HLTH 1005 Anatomy & Physiology, 4 credits
This course is a basic study of body structure and function. All body systems will be studied. A prior course in high school is recommended. (Prerequisites: None)

HLTH 1040 Medical Terminology, 2 credits
This course is designed to cover word analysis, spelling and usage of word, roots, suffixes, and abbreviations common to the medical profession. Emphasis will be placed on spelling and constructing medical terms. (Prerequisites: None)

HLTH 1050 Body Structures, 2 credits
This course examines the fundamentals of human anatomy. Relationships and organization of the major structures of the body will be covered, along with the vocabulary of key anatomic structures necessary to communicate information in a medical environment. (Prerequisites: None)

HLTH 1101 TMA- Trained Medication Aide , 3 credits
This course is the state approved program. The legal requirements concerning medication administration, general information, and administration skills of oral, rectal, and topical routes will be discussed. The ten major body systems and how they are involved in the pharmacology of drug use will be studied. The students will not administer medications on clinical, but will be ready to demonstrate their skills to the employing agency. (Prerequisites: Nursing Assistant)

HLTH 1103 Nursing Assistant/Home Health Aide, 5 credits
This course introduces concepts of basic human needs, basic nursing and personal care skills, mental health and social needs, restorative services, residents' rights, and home health. The skills are performed in a supervised laboratory and long term care clinical setting. The course is the MN State approved curriculum and meets the requirements of the Minnesota Department of Health. Upon completion of the competency evaluation, students can be employed in either a long term care facility, hospital, or assisted living facility. Minnesota Department of Health: Reimbursable Expenses Nursing assistants who pay for the cost of their training and testing prior to employment are eligible for reimbursement. The nursing assistant has 1 year from completion of the test to turn in receipts requesting reimbursement. The facility has 90 days to reimburse the nursing assistant. If the nursing assistant does not remain employed as a nursing assistant for 90 days, the nursing home is under no obligation to reimburse the nursing assistant. The first nursing home the nursing assistant stays at for at least 90 days would then be responsible to reimburse the nursing assistant if it has been 1 year or less since completion of the test. Only certified nursing homes or boarding care homes are required to reimburse a nursing assistant. (Prerequisites: None)

HLTH 1105 Home Health Aide, 1 credit
This course introduces concepts of home care services, goals and responsibilities; how nutrition and homemaking skills contribute to the clients wellbeing, basic emergency procedures, the clients Bill of Rights, ethics and confidentiality related to home care, guidelines for reporting and recording, and special populations. This course meets the requirements of the Federal Government and the Minnesota Department of Health. (Prerequisites: Proof of successful completion of an approved Nursing Assistant Course and is currently in good standing on the Nursing Assistant registry).

Golf/Horticulture

HORT 1045 Plant Pests II, 4 credits
This course provides the skills necessary to identify and manage insect and disease problems. Essential environmental protection and control of pests and diseases is provided using Integrated Pest Management concepts. To ensure successful culture of horticultural crops, an understanding of these principles. Topics include insect structure, classifica-

tion, injurious insects and their control plus infectious/non infectious diseases, symptoms and their control. (Prerequisites: None)

HORT 1210 Greenhouse Operations, 4 credits
The course examines the construction and operation of greenhouse structures. Topics include heating and cooling systems for greenhouses, methods of propagation for greenhouse grown plants, irrigation systems, plus the production of bedding plants, identification, and care of tropical green plants. (Prerequisites: None)

HORT 1230 Environmental Gardens, 3 credits
This course covers annuals and perennial flowers, their identification, culture and use in the landscape. Specialized use of plants in sustainable landscapes will also be covered. Examples of plants used for butterflies, hummingbirds, roof top gardens, rain gardens and water gardens will be examined. (Prerequisites: None)

HORT 1310 Specialty Horticulture Crops, 3 credits
This course is designed to introduce students to the techniques and requirements of horticultural crops of special or local interest. Topics include warm and cool season vegetables, small fruits, field grown cut flowers, herbs, woody cut stems, as well as marketing strategies, cultural and harvesting practices, and site selection. Upon completion of the class, students will be able to choose, grow, and market a horticultural crop of special or local interest. (Prerequisites: None)

Interdisciplinary Studies

INTS 1000 (MnTC 2) Critical Thinking Applications for College, 3 credits
This course applies critical thinking to develop awareness of problem-solving skills while exploring higher-education processes. Students create an individualized education plan based on personal and professional goals they identify. The course presents opportunities to expand awareness of technology alternatives available for communicating ideas, interacting and collaborating with others, exploring information, and experimenting with new ideas during the college experience and in future careers. (Prerequisites: None) (3 Credits Lecture/0 Credit Lab)

INTS 1010 (MnTC 2) College and Career Success, 1 credits
College and Career Success (INTS 1010) is a course designed to help students successfully develop and achieve academic and career goals. This course is designed to provide students with the necessary knowledge and support to assist them in navigating the college system, in establishing obtainable goals, and in practicing strategies to promote goal achievement. The course is designed to provide students with the experiences necessary to obtain knowledge of college terminology and the general functions of college services. By use of an experiential approach, this course will promote the active discovery and development of psychosocial skills which directly influence academic and career success, such as resilience, adaptability, emotional management, life balance, interpersonal collaboration, and self-confidence. (Prerequisites: None) (1 Credits Lecture/0 Credit Lab)

Information Technology Management

TLIT 1005 Technology Fundamentals, 3 credits
This is a college level course which introduces current business and social technologies and how to use software applications as productivity tools. The fundamentals of file management, the internet/web, hardware, software, operating systems, security, and ethics will be introduced. The course will introduce word processing, spreadsheet software, presentation software and other microcomputer applications using Windows and the Microsoft Office suite. (Prerequisites: None)

ITEC 1002 Networking Fundamentals, 3 credits
This course introduces the concepts of Networking. Emphasis is placed on designing and maintaining a secure network environment using personal computers. Material to be covered includes local and wide area networks, their use, and the hardware and software used to create networks. Information will be presented on the fundamentals of DOS (Disk Operating System), file management, hardware, software, operating systems, network documentation, security and ethics. (Prerequisites: None)

ITEC 1016 Web Development Technologies, 4 credits
This course will cover designing and developing dynamic web sites using Hyper Text Markup Language (HTML5) and Cascading Style Sheets (CSS3). Emphasis is placed on the design, development, deployment, and maintenance of interactive web sites. Creating a complete set of documentation and evaluating good web site design is covered. (Prerequisite: None)

ITEC 1025 Project Management, 4 credits
This course provides a comprehensive overview of project management. The course focuses on an understanding of concepts and fundamental practices/techniques used in effective project management. Course instruction is enhanced through hands-on labs, a final team project and exercises. (Prerequisites: None)

ITEC 1035 Documentation Standards, 2 credits
This course covers creating usable technical documentation with an emphasis of effective communication, content, standards and styles, identifying target audiences, and research. (Prerequisites: None)

ITEC 1070 IT Support, 1 credits
The course involves the study of Information Technology (IT) support and customer-interaction job skills. IT support strives to deliver high-quality technical customer support and customer-interaction skills including listening, responding, telephone skills, teamwork, solving and preventing incidents, and conflict resolution. The course will also cover how to apply these skills when dealing with co-workers, customers, and vendors. (Prerequisites: None)

ITEC 2100 Programming Logic & Design, 4 credits
This course provides the beginning programmer with a guide to developing structured programming logic. Students are introduced to programming concepts, enforcing good style and logical thinking. Key points covered include: what structured programming is; the advantages of writing structured programs; modular programming; procedural code; decision making; looping; array manipulations; writing interac-

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tive programs; and object oriented programming. Hands-on programming exercises will be used to enhance the concepts introduced. No special knowledge of mathematics, accounting, or other business disciplines is required. (Prerequisites: None))

ITEC 2105 JAVA Programming, 4 credits
This course introduces students to object-oriented programming (OOP) concepts along with the Java programming language syntax to implement these concepts. The course emphasizes a hands-on approach with the students building Java programs that incorporate OOP concepts such as: Objects, Classes, Methods, Decision Making, Inheritance, and Graphical User Interface (GUI) design. (Prerequisites: ITEC 2100 or instructor approval)

ITEC 2120 Database Design & SQL, 4 credits
This course is designed to provide individuals to build a database application. Students will create the logical and physical database design. They will create tables, queries, forms and reports while implementing proper design methodologies. Students will use SQL to create a simple query, join multiple tables, perform unions, simple totals, grouping data, inserting data, updating data and deleting data. Course instruction is enhanced through hands-on labs, projects, and exercises. (Prerequisites: TLIT 1005 or instructor approval)

ITEC 2121 SQL and Database Design, 4 credits
This course is designed to provide instruction in designing and querying a database using Structured Query Language (SQL). Students will create logical and physical database designs. They will create tables and queries, while implementing proper design methodologies. Students will use SQL to create a simple query, join multiple tables, perform unions, simple totals, grouping data, inserting data, updating data, and deleting data. Course instruction is enhanced through hands-on labs and exercises. (Prerequisites: None)

ITEC 2140 Business Intelligence, 4 credits
This course will provide an introduction to performance measurement tools designed to capture relevant data from all segments of an organization. It will include topics of planning and organizing data into a coherent structure and output that can be used for strategic decision processes. Hands on labs will be used to enhance student learning. (Prerequisites: TLIT 1005)

ITEC 2145 Database Programming, 4 credits
This course teaches students how to create and execute server-side database programming. It builds upon concepts introduced in the Database Design and SQL course. Advanced topics include creating and writing stored procedure, functions, and triggers. (Prerequisites: ITEC2120 or Instructor approval)

ITEC 2150 Advanced Business Intelligence, 3 credits
In-depth learning of advanced Business Intelligence knowledge and techniques are addressed in this course. (Prerequisite: ITEC 2140)

ITEC 2207 Windows Server Administration, 4 credits
This course will cover the installation and configuration of a Windows Server network operating system in a network environment. Students will construct PowerShell scripts and become familiar with command structure. (Prerequisites: ITEC 1002)

ITEC 2215 Linux/Web Server Administration, 4 credits
This course introduces the fundamentals of the Linux operating system using. Students will learn the basics of the Linux file systems and editors. Linux file processing, administrative commands and utilities, and creating scripts are also covered. In addition, this course provides a foundation for administering, securing and maintaining a Web Server. Skills that will be taught in this course include: building a Web site; basics of networks, web servers, and web clients; configuration and maintenance of your web site; server side includes; and secure online transactions. Students will be provided hands-on practice of many of the principals using the latest Web server software. (Prerequisites: ITEC 1002 or TLIT 1005, or Instructor Approval)

ITEC 2220 Database Administration & Security, 4 credits
This course is designed to teach the student how to administer a Database (DB) Server. Topics include: planning and installing the database; manage storage; create user accounts; assign security; create and manage databases; transfer data into and out of the server's databases; and data warehousing concepts. Course instruction is enhanced through hands-on labs, projects, and exercises. (Prerequisites: ITEC 1002)

ITEC 2230 Network Security Fundamentals, 4 credits
In this course, we will take an in-depth look at network security concepts and techniques. Students will examine theoretical concepts that make the world of security unique. This course provides a fundamental understanding of network security principles and implementation, authentication, types of attacks, malicious code, email threats and countermeasures, Web applications, remote access, and file and print services, intrusion detection systems, firewalls, and physical security concepts, security policies, disaster recovery, and computer forensics. This course will adopt a practical, hands-on approach when examining networking security techniques along with examining different network strategies. (Prerequisites: ITEC 1002 or Instructor approval)

ITEC 2311 User Experience and Interface Design, 4 credits
This course introduces the user-interface design cycle. Along the way learners are exposed to user experience design concepts, user research, elements of user experience, information architecture, wireframing, design tools, usability assessment, and communication. Industry standard tools and technologies will be used with an emphasis on hands-on experience. (Prerequisite: ITEC 1016)

ITEC 2317 Web Interactivity Technologies, 4 credits
Web interactivity tools will be used to develop a web application. The course will cover the principles of web services, web security, search engine optimization, and content management systems. Writing documentation, critiquing web application code, and giving feedback on web application code will be practice. (Prerequisites: TLIT 1005, ITEC 2100 and ITEC 1016)

ITEC 2326 Gaming Technologies, 4 credits
This course introduces the student to game programming. Using a game engine, that student will develop games that employ sprites, use vector coordinates to position sprites, incorporate sound effects, and respond to user input from the keyboard and the mouse. The student will implement games using object-oriented programming (OOP) concepts. The course emphasizes OOP concepts such as: sequence structures, se-

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lection structures, classes, objects, and methods or functions. Writing documentation, critiquing game codes, and giving feedback on game code will be practiced. (Prerequisite: ITEC 2100)

ITEC 2331 Advanced Gaming Technologies, 5 credits
This course builds on concepts gained in Gaming Technologies. A fame engine will be used to create more advanced games employing collision detection and animation using sprites. Concepts from physics, such as gravity and acceleration, will be used to create collisions. The student will implement games that read data from files, use collections to store data, and use Object-Oriented Programming (OOP) concepts. This course emphasizes OOP concepts such as inheritance and polymorphism. Writing documentation, critiquing game code, and giving feedback on game code will be practiced. (Prerequisites: ITEC 2326)

ITEC 2340 Scripting Languages, 4 credits
This course introduces students to the latest scripting technologies with an emphasis on designing and developing dynamic web pages for both client-side and server-side execution. (Prerequisites: ITEC 1016 and ITEC 2100 or instructor approval)

ITEC 2342 Game Scripting, 2 credits
The course focuses on using scripting languages to create or enhance games. Topics include programming logic, event handling, functions, variables, and objects as related to game development. (Prerequisites: ITEC 1016)

ITEC 2347 Software and Game Testing, 4 credits
This course provides an overview of software and game testing. Topics covered include testing methodology, testing importance, test case creation, testing lifecycle, testing tools, bug categories, and documenting bugs. Student will gain hands-on experience testing software applications and games. (Prerequisites: None)

ITEC 2346 Advanced Scripting Techniques, 4 credits
Advanced Scripting techniques will teach student how to create richer, more responsive applications by going beyond the classic client-side scripting model and utilizing open source frameworks and dynamic libraries. This course will emphasize the use of leading industry standards and best practices of developing interactive web applications that utilize both server and browser processing resources, as well as object-oriented concepts of Document Object Model manipulation and event-handling. Course projects will rely on asynchronous request processing and layered architectures. (Prerequisites: ITEC 2340 or Instructor approval)

ITEC 2407 Internetworking Devices I, 4 credits
This course provides instruction in the design and implementation of Local Area Network (LAN) and Wide Area Network (WAN) networks using internetworking devices. (Prerequisites: ITEC 1002)

ITEC 2408 Internetworking Device II, 4 credits
This course provides advanced instruction in the design and implementation of Local Area Network (LAN) and Wide Area Network (WAN) using internetworking devices. Topics include the installation, operation, and troubleshooting of a small to medium-size network, LAN switching technologies, routing, and WAN technologies.(Prerequisites: None; Co-requisite: ITEC 2407)

ITEC 2411 Networking Scripting, 2 credits
This course addresses the design of scripting languages and their applications. Demonstrate writing simple scripts to automate system administration tasks using appropriate languages. (Prerequisites: ITEC 1001 or Instructor Approval)

ITEC 2415 Virtualization Technologies, 4 credits
In this course, you gain the skills needed to install, configure and manage virtual servers and workstations. Students will learn to employ VMware, Microsoft virtual machine (VM), leverage VMs to build testing, support and training environments, partition physical servers to decrease operating costs and migrate from physical to virtual machines. Additional topics include using hypervisors, or a virtual machine monitor (VMM), to facilitate workload delivery, how to manage a centralized, on-demand application delivery framework and implement failsafe system backup and recovery strategies. (Prerequisites: ITEC 1002 or subject to Instructor Approval)

ITEC 2430 Firewall Security, 4 credits
This course provides foundational information concerning firewall technology, remediation and security risks, network security design, implementation, and monitoring of a firewall network security plan. This plan will identify elements of firewall design, types of security threats, and responses to security attacks. (Prerequisite: ITEC1002 or Instructor Approval)

ITEC 2440 IDS/IPS and Auditing , 4 credits
This class will cover the implementation of Intrusion Detection/Intruder Prevention (IDS/IPS) systems in the enterprise environment. Students will work with a variety of systems to recognize hostile activity both inside and outside the organization and appropriate responses. Weak points in an organization's security profile and concepts of Information Technology (IT) auditing will be discussed. (Prerequisite: ITEC 1002)

ITEC 2450 Ethical Hacking , 4 credits
This class will utilize and interactive environment in which scanning, testing, hacking, and securing a network occurs. Each student will work with current essential security systems. The course will introduce perimeter defense, scanning, and attacking networks. Students then learn how intruders escalate privileges and what steps can be taken to secure a system. (Prerequisite: ITEC 1002)

ITEC 2501 Android Application Development, 4 credits
Applications will be created for an deployed to the Android Operating Systems (OS). The course will cover designing a user interface, storing and retrieving data, using a content provider, integrating with a web service, using location services, displaying images, and playing audio files. Project management techniques will be implemented. Critiquing an Android OS application and providing feedback on the application will be practiced.(Prerequisite: ITEC 2105)

ITEC 2506 Apple Programming, 4 credits
The course focuses on programming for the Apple mobile Operating System (OS). The course will cover variables, constants, type inference, variable scope, loops, decision structures, arrays, and functions. Object-oriented programming concepts including encapsulation, inher-

itance, and polymorphism will be examined. Critiquing programming code and providing feedback on code will be practiced. (Prerequisite: ITEC 2100)

ITEC 2511 Apple Mobile Application Development, 4 credits
This course focuses on developing Apple mobile applications and deploying applications to an Apple mobile device emulator. The course covers designing user interfaces, working with views and view controllers, and working with navigation controllers. Developing an Apple mobile application that displays images and plays sounds is covered. (Prerequisites: ITEC 2506)

ITEC 2600 Application Development, 4 credit
This course focuses on introductory programming using development tools. The course will cover installing and using an Integrated Development Environment (IDE). Programming principles such as variables, constants, data types, variable scope, decision structures, repetition structures, and arrays will be covered. The concept of using methods to modularize code will be discussed. Object-oriented programming concepts including objects, classes, encapsulation, inheritance, and polymorphism will be examined. Agile development practices will be introduced. Critiquing code and providing feedback on code will be practiced. Writing documentation, including comments in the code, will be covered. (Prerequisites: ITEC 2100)

ITEC 2601 Database Application Development, 4 credit
This course focuses on intermediate programming using development tools. The course will cover developing, compiling, deploying, and testing applications using an Integrated Development Environment (IDE). Applications that employ User Interfaces (UIs) for specific operating systems will be developed. The concept of using the debugger to troubleshoot errors will be examined. Developing applications using databases will be introduced. Database concepts will be examined in the context of application development. One or more programming projects will be implemented using agile practices. Documenting programming code, critiquing code, and providing feedback on code will be practiced. (Prerequisites: ITEC 2100 and ITEC 2600)

ITEC 2901 Integrated Capstone Project, 4 credits
This course is designed as the culmination of the student's educational experience. Students will be given the opportunity to work as a member of an integrated development team to analyze, design, develop, test and/or document an Information Technology (IT) system to a real-world scenario. Each student will be assigned to a development team and given a user requirement statement for an IT project. Each team will be fully responsible for all aspects of the project from project planning to demonstration of the completed project to a review board. (Prerequisite: Course to be taken in student's last semester or Instructor Approval)

Judicial Reporting/Broadcast Captioning

JRBC 1000 Realtime Reporting Orientation, 1 credit
Students will receive a brief overview of what realtime machine shorthand is and will be introduced to careers in realtime machine shorthand. Both the Judicial Reporting and Captioning programs will be reviewed. This course will examine the history of reporting, professional associations, equipment needs, technological trends, and role of the working court reporter and/or captioner within Judicial Reporting and Captioning fields. (Prerequisite: None)

JRBC 1005 Realtime Reporting l, 4 credits
This course is the instruction of basic realtime machine shorthand theory for judicial reporting and captioning. The course will teach the student how to read, write, and transcribe the spoken word with punctuation by means of a realtime translation theory. Students will write on their steno machine using live dictation, electronic media and/or realtime technology, and teacher interaction. Students will read back, analyze steno outlines, and produce transcriptions at various lengths from their steno outlines on a weekly basis. Using computer-assisted technology (CAT) software, students will begin to build a personal dictionary. A personalized Instructional Development Plan (IDP) shall be developed to support student success in achieving prescribed program outcomes and shall be a joint effort between teacher and student. The IDP shall be reevaluated at least monthly and provide a means for regular faculty feedback and coaching. Students should practice as much as possible, with 18 hours per week being a minimum. (Prerequisite: ADSC 1003 or successful typing testout at 25 wpm or more)

JRBC 1031 Foundations of Law, 3 credits
This course is an overview of law covering all major areas of American law and the American legal system. Topics include civil law, criminal law, the judicial system (discovery, trial, and appellate processes), legal terminologies, and methods of researching legal citations. (Prerequisites: None)

JRBC 1105 Realtime Reporting ll, 4 credits
This course is the continued instruction of basic realtime machine shorthand theory for judicial reporting and captioning. The course will teach the student how to read, write, and transcribe the spoken word with punctuation by means of a realtime translation theory. Students will write on their steno machine using live dictation, electronic media and/or realtime technology, and teacher interaction. Students will read back, analyze steno outlines, and produce transcriptions at various lengths from their steno outlines on a weekly basis. Students will begin speedbuilding, with a goal of 60 to 80 wpm. Using computer-assisted technology (CAT) software, students will continue to build a personal dictionary. A personalized Instructional Development Plan (IDP) shall be continued to support student success in achieving prescribed program outcomes and shall be a joint effort between instructor and student. The IDP shall be reevaluated at least monthly and provide a means for regular faculty feedback and coaching. Students should practice as much as possible, with 18 hours per week being a minimum. (Prerequisite: JRBC 1005)

JRBC 1120 Realtime Reporting Technology, 3 credits
This course introduces a number of introductory technology concepts and terminology used with both operating systems and application software. Students will learn basic computer-aided transcription (CAT) and realtime translation software features. Students will learn about different types of technology applications that are currently used in different settings, including the computer-integrated courtroom (CIC), depositions, captioning and CART. (Prerequisites: JRBC 1000 and JRBC 1005)

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JRBC 1200 Realtime Reporting lll, 4 credits
This course will refine writing the spoken word with punctuation by means of a realtime translation theory for machine shorthand in court reporting and captioning. Students will continue working on speed and accuracy goals for literary, jury charge, and 2-voice testimony. This course focuses on 80-100 wpm. Students will continue reading, analyzing, and transcribing their steno notes. Students will hear dictation (live, online, or electronic media) for additional practice. Students are expected to practice a minimum of 18 hours per week. Students are expected to utilize the lab as assigned. This is an open-exit course; once requirements are completed, students may move on to Realtime Reporting IV (JRBC 2000). (Prerequisite: JRBC 1105)

JRBC 1400 Realtime Principles, 2 credits
This course teaches the basic to intermediate skills necessary to be a realtime reporter, including resolving conflicts, writing with prefixes and suffixes, resolving word boundary issues, learning three realtime alphabets, writing clean numbers, working with job dictionaries, and dictionary maintenance. Students will prepare to take the CPR exam. Students must pass three tests at 180 wpm with 97 percent realtime accuracy. (Prerequisites: JRBC 2100 or instructor approval)

JRBC 1405 Broadcast Captioning & CART Practicum, 2 credits
This course will provide students with an opportunity to perform actual captioning. Students will work to refine their writing skills for accurate captioning. Students will work with industry standard equipment and will caption many types of programming. Students will also practice in-classroom CART. This course will teach students how to perform CART or on-air captioning. Students will learn Captioning Technology. Students will work to create, build and enhance different job dictionaries, including sports, weather, geography, geo-political terms and names, national and international news, etc. (Prerequisites: Successful completion of Judicial Reporting Program or instructor approval)

JRBC 2000 Realtime Reporting IV, 4 credits
This course will refine the student's conflict-free machine shorthand theory for computer-assisted, realtime translation in court reporting, captioning and CART. Students will continue to work on speed and accuracy goals for literacy, jury charge, and 2-voice testimony. The course focuses on 120-140 wpm. Students will continue reading and transcribing their steno notes. Students will also utilize CD discs and cassette tapes from the lab for additional practice. Students are expected to practice a minimum of 15 hours per week outside of class. Students are expected to utilize the lab as assigned. This is an open-exit course; once requirements are completed, students may move on to Realtime Reporting V (JRBC 2100). (Prerequisites: JRBC 1200)

JRBC 2011 Transcription & English I, 3 credits
Students will learn Basic English rules that are specific to the reporting and captioning profession and how to apply them when writing and transcribing. Students will learn the basic rules of grammar, spelling, punctuation, and capitalization. Students will expand their word knowledge through vocabulary development. (Prerequisites: None)

JRBC 2016 Transcription & English II, 3 credits
This course will cover transcript production and considerations that need to be made when creating transcripts for sale. Students will learn

transcript production of Judicial Reporting proceedings as well as for broadcast captioning/CART. Students will learn to use reference materials when producing transcripts and how to locate additional references when needed. Students will also learn Advanced English rules that are specific to the reporting profession and how to apply them when writing and transcribing. Students will continue to develop advanced vocabulary usage. (Prerequisites: JRBC 2011)

JRBC 2030 Judicial Reporting Procedures, 3 credits
This course provides a hands-on learning environment in the study of court reporting procedures that will be used in trials, depositions, administrative hearings, and other judicial proceedings. Learners will have the opportunity to develop techniques in marking and handling of exhibits, indexing and storing steno notes, interrupting a speaker, swearing in or affirming witnesses and interpreters, certifying questions, transcript preparation and production, transcribing voir dire of the jury and witnesses, and polling of the jury. This course applies the National Court Reporters Association (NCRA) Code of Professional Ethics in simulated situations and case studies. (Prerequisites: JRBC 1105)

JRBC 2036 Word Enrichment, 3 credits
This is a vocabulary and usage course for realtime court reporting students. This course will focus on vocabulary, with an emphasis on comprehension and words that are frequently confused and misused. Students will prepare for the Registered Professional Reporter (RPR) certification written exam, including the study and review of legal and medical terminologies, course reporting procedures, technology, and court reporting skills. (Prerequisites: None)

JRBC 2040 Business Success for Realtime Careers, 2 credits
This course is an overview of the office environments of small businesses and independent contractors in the realtime reporting and captioning careers. This course will focus on setting up an office, tax preparedness, written business communications, promotional presentations, effective resume writing, and job-searching skills. (Prerequisites: None)

JRBC 2100 Realtime Reporting V, 4 credits
This course will refine the student's conflict-free machine shorthand theory for computer-assisted, realtime translation in court reporting and captioning and assistive realtime reporting for the hearing impaired. Students will continue working on speed and accuracy goals. Students will continue reading and transcribing their steno notes. Students will also utilize CD recordings for additional practice. Students are expected to practice a minimum of 15 hours per week outside of class. This is an open-exit course; once requirements are completed, Judicial Reporting students may move on to JRBC 2120, Realtime Reporting VI. (Prerequisites: JRBC 2000)

JRBC 2120 Realtime Reporting VI, 4 credits
This course will refine the student's conflict-free machine shorthand theory for computer-assissted, realtime translation in court. Students will continue working on speed and accuracy for literary, jury charge and 2-voice testimony. This courses focuses on 200-225 wpm. Students will continue reading and transcribing their steno notes. Students will also utilize CD discs and cassette tapes from the lab for additional practice. Students are expected to practice a minimum of 15 hours per week

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outside of class. Students are expected to utilize the lab as assigned. (Prerequisites: JRBC 2100)

JRBC 2126 Captioning & CART Procedures & Research, 3 credits

This course will provide student with an opportunity to refine their technology skills in setting up and troubleshooting captioning and CART equipment. Students will learn how to read and follow a broadcast script. Students will learn the psychology of captioning, and the use of prescripting and broadcast news preparation. Students will also work to uncover research methods and sources for topical information. This course will teach students how to prepare for their CART or on- air captioning job. Students will work to create and enhance different job dictionaries, including sports, weather, geography, geo-political terms and names, national and international news, etc. (Prerequisites: Successful completion of JRBC 2100 or instructor permission)

JRBC 2135 Broadcast Captioning/CART Internship, 2 credits

This course will give the student actual writing time in a captioning/ CART setting. Wherever possible, students will be given opportunities to create a (not-for-sale) transcript. Internship opportunities will only be arranged through the school. (Prerequisites: None)

JRBC 2140 Judicial Reporting Internship, 2 credits

This course will give the student actual writing time in a reporting setting. Wherever possible, students will be given opportunities to do realtime reporting in court and deposition settings with official and freelance reporters. Students will use these reporting opportunities to create a (not-for-sale) transcript. Internship opportunities will only be arranged through the school. (Prerequisites: None)

JRBC 3101 Scoping Procedures, 3 credits

This course will emphasizes concepts related to the scoping experience, including reading raw steno of multiple reporters, Computer-Aided Transcription (CAT) software editing, proofreading, transferring files, research, reporter/scopist working relationship, and setting up a home office. (Prerequisite: JRBC 1105)

Landscaping

LNSC 1213 Specialty Landscapes Specialty Landscapes, 3 credits

This course is designed to cover topics in; landscape site plan interpretation, site preparation, plant material installation and maintenance; landscape component cost analysis, and bid preparation. Emphasis will be placed upon environmental best practices for installation.
Special projects covered include theme gardens, patios, ponds, waterfalls and fountains. (Prerequisites: None)

LNSC 1223 Sustainable Designs, 3 credits

This course covers the understanding and utilizing of landscape maintenance and management skills which allows grounds management professionals to maintain high-quality landscape settings. This course will present current turf management practices, maintenance of plant materials, planting beds, and other landscape features. Small business management will also be covered. (Prerequisites: None)

LNSC 1233 Introduction to Landscape Horticulture, 3 credits

This course covers construction materials for landscape construction that include brick, natural stone, concrete, wood, and synthetic products. Landscape construction features are present in the landscape for functional and aesthetic value. The turf industry uses many different hardscape materials in their development. When properly designed and constructed, retaining walls, patios, and walkways add character and value to any environmental landscape. Topics presented in this course include the study of construction materials, construction theory and installation techniques. Actual projects will be constructed during the presentation of the course. (Prerequisites: None)

LNSC 1240 Plant Production, 4 credits

This course introduces students to concepts involved in sustainable production of landscape plants. Topics covered provide the practical skills in the areas of propagation, growing, harvesting, and utilizing of field and container grown woody plants and perennials. A special emphasis is placed on sustainable practices with an introduction to certifications within the industry. (Prerequisites: None)

LNSC 1250 Retaining Wall & Surface Design & Construction, 3 credits

This course is structured to present design concepts and detailed construction methods with hands on experience. Patios, decks, walkways, and retaining walls constructed of brick, stone, concrete or wood add beauty and longevity to the outdoor landscape environment. When properly designed and constructed these construction features will provide years of usefulness. Topics presented in this course include the study of construction materials, construction theory and construction techniques. Actual projects will be constructed during the presentation of the topics covered in this course. (Prerequisites: None)

LNSC 1260 Landscape Design CAD, 3 credits

The use of computer-aided design is increasing in the landscape industry due to the quality and ease of which designs are created and modified using this tool. It is critical for the Landscape Design Professional to be able to apply computer-aided design skills to landscape drawing. This course will present information on the use of CAD software programs in creating drawings. Topics covered include CAD configurations, CAD menus, command entry, data entry, utility commands, entity draw commands, edit and inquiry commands, and display controls. (Prerequisites: None)

LNSC 1270 Supervised Occupational Experience, 6 credits

The Landscape Technology Supervised occupational experience provides an opportunity for students to apply and integrate classroom and laboratory knowledge to actual work situations. The intent of this SOE is to provide a supervised work experience in order for students to build their expertise and proficiency with landscape skills as well as enhance their own problem solving abilities. The SOE structure allows students to utilize program content goals in skill building, apply to special problem learning situations, and interact in at least one student-employer seminar. (Prerequisites: Successful completion of a minimum of 20 technical credits and has a minimum 2.0 GPA)

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LNSC 1273 Supervised Occupational Experience, 2 credits
The Landscape Technology supervised occupational experience provides an opportunity for students to apply and integrate classroom and laboratory knowledge to actual work situations. The intent of the SOE is to provide a supervised work experience in order for students to build their expertise and proficiency with landscape skills as well as enhance their own problem solving abilities. The SOE structure allows students to utilize program content goals in skill building, apply to special problem learning situations, and interact in at least one student-employer seminar. (Prerequisites: LNSC 1270 may not be taken concurrently. Successful completion of a minimum of 20 technical credits and has a minimum 2.0 GPA)

Machine Trades

MACH 1090 Machining Fundamentals, 2 credits
This course provides students an opportunity to have hands-on experience of reading a blueprint of a part and going through the process of manufacturing a product. (Prerequisites: None)

MACH 1101 Milling, 4 credits
This course covers basic milling machine, drill press, and band saw operation, safety, machine controls, machine setup, common milling operations such as cutting tools geometry, conventional milling machine principles, machining feeds and speeds calculation. The operation of drill presses and drilling tools such as countersinking, counter boring, tapping, reaming is also addressed. (Prerequisites: None) (Co-requisites: MACH 1106)

MACH 11016 Lathe, 3 credits
This course covers basic lathe operation, safety, machine controls, machine setup, common lathe operation such as cutting tools geometry, grinding tools, facing, turning, knurling, boring, external threading, internal threading, grooving, and recessing. Machine feeds and speeds calculation are covered. (Prerequisites: None) (Co-requisites: MACH 1101)

MACH 1121 Metrology, 2 credits
This course covers the introduction to the calibrations and use of inspection instruments, steel rules, vernier, dial and digital calipers, micrometer, telescoping gauge, small-hole gauge, dial indicators, precision height gauge, optical comparator, and gauge blocks. This course will build reference skills on mathematics, mechanics, and strength of materials, dimensioning, gauging, fits, tooling and manufacturing processes, along with mechanisms such as threads and gears, with the use of standard manufacturing reference material. We will discuss the principles of Statistical Process Control (SPC) and International Organization for Standardization (ISO) standards. (Prerequisites: None)

MACH 1132 Blueprint Reading I/CAD, 3 credits
This course includes the basic interpreting and drawing of 2D Engineering drawing principles. Topics include one-, two- and three-view drawings, dimensioning, tolerance, symbols, sketching, incline surfaces, circular features, sectional views, surface texture, and auxiliary views. (Prerequisites: None)

MACH 1140 CAD I, 1 credits
This course includes the basic use and operation of 2D CAD (Computer Aided Design) software. This course covers the construction and manipulation of drawings, using software to draw and dimension parts. (Prerequisites: None)

MACH 1171 Math for Machinists , 3 credits
This course covers common fraction, decimal, and percentage calculation applications to manufacturing standards. Linear measurements, geometric principles used in machine shops including compound angles, plane geometry, trigonometry, oblique triangles, parallel lines, laws of sine, cosine, and tangent are covered. (Prerequisites: MATH 0801 or appropriate test score)

MACH 1200 Advanced Machining, 3 credits
This course covers advanced milling machine and lathe operation including machine safety, the manufacturing of integrated close tolerance projects with common machine tool and prints. The use of attachments and special processes will be covered. (Prerequisites: None)

MACH 1220 Grinding, 2 credits
This course covers grinding machine operations in a tool room setting. The manufacturing of integrated close tolerance projects with common grinders. Topics covered include set-ups, form grinding, the use of attachments, and special processes. (Prerequisites: MACH 1101, MACH 1106, and MACH 1121)

MACH 1231 Blueprint Reading/CAD II, 1 credit
This course includes standards of graphic communication of engineering drawing principles, orthographic projections, dimensioning, tolerancing and section views. The course makes extensive use of modern software to create engineering drawings and introduce solid modeling. (Prerequisites: None)

MACH 1240 Geometric Dimensioning & Tolerancing, 3 credits
This course establishes a solid understanding of geometric principles and methodologies of geometric dimensioning and tolerancing. Topics covered include symbols, datum's and gauging principles, form and profile, orientation, location and run out tolerances, and virtual condition. We will study the setup and operation of Coordinate Measuring Machine (CMM). (Prerequisites: MACH 1121 and MACH 1132)

MACH 1251 CNC Machining, 2 credits
This course will introduce the students to the basic fundamentals of computer numerical controls. Topics included are introduction to safety procedures, conversational controls, and operation of various type of CNC machine controls. (Prerequisites: MACH 1101, MACH 1106, MACH 1121 and MACH 1132)

MACH 1261 CNC Programming I, 2 credits
This course covers basic programming for CNC (Computer Numeric Control) milling machines along with CNC basic machining language. (Prerequisites: MACH 1171 or MATH 1650)

MACH 1275 Quality Standards, 1 credit
This course will cover the aspects of quality control as applied to the shop-floor environment including inspection documentation, process control, and equipment used in the collection of data. Topics including Statistical Process Control (SPC), First Article inspections, and applicable inspection collection of data to various industry standards will be covered. (Prerequisites: MACH 1121)

MACH 2310 CNC Milling, 3 credits
This course will introduce the students to the fundamentals of computer numerical controls. Topics included are introduced to safety procedures, Expose students to setup and editing of operation of various types CNC machine controls. (Prerequisites: MACH 1251 and MACH 1261) (Co-requisites: MACH 2320)

MACH 2320 CNC Turing, 3 credits
This course will introduce the students to the advanced fundamentals of computer numerical controls. Topics included are introduced to safety procedures, expose students to setup and editing of operation of various types CNC machine controls. The student will be required to manufacture project from start to finish. (Prerequisites: MACH 1251 and MACH 1261) (Co-requisites: MACH 2310)

MACH 2331 CAM , 1 credit
This course is an introduction to CAM (Computer Aided Manufacturing) systems. Subjects address the use of 2D basic principles, techniques, and applications of computer numerically controlled machine tools. Includes the planning, use, expansion, and updating of the computerized systems that are used to meet the needs of industry. (Prerequisites: MACH 1121, MACH 1200 and MACH 1231)

MACH 2340 CNC Programming II, 2 credits
This course will cover Intermediate level programming. Topics included such as sub programs, multi fixtures and special function. (Prerequisites: MACH 1261)

MACH 2351 Mold/Die Making Theory, 3 credits
This course covers basic manufacturing fundamentals of mold construction (transfer and injection molds) runners, gates, cores, cavities, injections, ejection, casting, joining, polymers and powder metals. It also consists of basic manufacturing principles of blanking and piercing dies including deformation, sheet metal forming, bending, cutting clearance, punches, pilots, strippers, and die block construction. (Prerequisites: MACH 1200, MACH 1221 and MACH 1240)

MACH 2360 Fixture and Tooling, 4 credits
This course is to gain design knowledge and actual building skills in machining set ups and operations. Course consists of designing tools, gages, simple jigs, and fixtures for; lathe, vertical mills, drill press, band saw, surface grinders, etc., while working on projects that simulate real basic construction practices employed in mass production processes. We will study basic metallurgy. (Prerequisites: MACH 1231, MACH 1240 and MACH 1251)

MACH 2411 Tool and Cutter Grinding, 2 credit
This course covers the basic knowledge and skills needed for grinding cutters as it pertains to the manufacturing industry. (Prerequisites: MACH 1220 and MACH 2360)

MACH 2420 EDM Machining, 2 credits
This course covers the basic fundamentals of conventional E.D.M. theories and operations. Topics included are safety, components, dielectric, electrodes, power supply controls, amperes, electronic envelope, work piece, on-off time, arc gap. Programming and operation of CNC Ram, and Wire. (Prerequisites: MACH 2330)

MACH 2435 Swiss Machining 2 credits
This course will cover the programming and setup of Swiss machine centers. Operations will focus on reduced handling of parts to accomplish turning, milling, drilling, and threading on Swiss machine centers. Utilization of Computer Aid Machining (CAM) software will be covered. (Prerequisites: MACH 1171 or MATH 1650, MACH 2320, MACH 2331, and MACH 2340)

MACH 2440 CNC Programming III, 1 credit
This course will cover Advanced level programming. Topics included such as multi axis and parametric programming. (Prerequisites: MACH 2340)

MACH 2451 CNC Design and Manufacture, 3 credits
This course covers the advanced machining operations required to design a construct a complete manufactured cap stone project. The use of CNC and manual machines required in manufacturing and design will be used. An overview will be presented at the completion of manufacturing. (Prerequisites: MACH 2310, MACH 2330, MACH 2331, MACH 2340, MACH 2351 and MACH 2360)

MACH 2462 Multi-Axis Milling, 3 credit
This course will cover the programming and setup of multi-axis milling machines utilizing 4th and 5th axis rotaries. Programming utilizing Computer Aid Machining (CAM) software will be covered. This may include but no limited to focusing on non-standard plane orientation of parts through locked positioning and full rotary cutting. Fixture systems and probing will be covered. (Prerequisites: MACH 1171 or MATH 1650, MACH 2310, MACH 2331, MACH 2340, and MACH 2360) (Co-requisite: MACH 2472)

MACH 2472 Multi-Axis Turning, 3 credits
This course will cover the programming and setup of multi-axis turning centers utilizing live tooling. Operations will focus on reduced handling of parts to accomplish turning, milling, drilling, and threading on multi-axis turning centers. Utilization of Computer Aid Machining (CAM) software will be covered. (Prerequisites: MACH 1171 or MATH 1650, MACH 2320, MACH 2331, and MACH 2340) (Co-requisite: MACH 2462)

MACH 2510 Multi Axis CNC Programming, 4 credits
This is an advanced course designed to give the student a deeper understanding of multi axis programming. This course deals with complex machine programming methods and will require a prior understanding of "G" and "M" code programming. (Prerequisites: Evaluation Exam

through Machine Trades department)

MACH 2520 Multi Axis CNC Programming, 5 credits
This is an advanced course designed to give the student an understanding of multi axis machining. This course deals with complex setup and machining methods and will require a prior understanding of advanced "G" and "M" code programming. (Prerequisites: Evaluation Exam through Machine Trades department)

Medical Assistant

MAST 1200 Medical Assisting Seminar, 2 credits
This course addresses the legal and ethical issues facing the Medical Assistant profession. (Prerequisites: HLTH 1040 and Restricted to the following majors: Medical Assistant AAS and diploma)

MAST 1300 Medical Administrative I, 2 credits
This course is designed to introduce the student to medical office communication and procedures. Medical reception tasks, document production, insurance coding, medical accounting functions and medical office management will be covered. (Prerequisites: HLTH 1040, ADSC 1003, or 25 words per minute (wpm) keyboarding ability; Restricted to the following majors: Medical Assistant AAS and diploma)

MAST 1400 Pharmacology I, 2 credits
Pharmacology I is designed to provide an understanding and basic background pharmacology. This course will cover drug classifications, vocabulary, abbreviations, schedules of drugs, and pregnancy categories. In addition, the course will cover the use of drug information sources. Alternative drug therapy, vitamins, minerals, and drug effects on the elderly will be covered. (Prerequisites: HLTH 1005, HLTH 1040 and restricted to the following majors: Medical Assistant AAS and diploma)

MAST 1500 EKG, 1 credit
This course will demonstrate how to perform a 12-lead electrocardiogram (EKG). Anatomy of the heart and circulatory system will be reviewed. Students will perform EKGs in a simulated lab. (Prerequisites: HLTH 1005; Restricted to the following majors: Medical Assistant AAS and diploma)

MAST 1600 Laboratory I, 4 credits
This course is designed to introduce the student to clinical laboratory. Basic aspects of laboratory safety, use and maintenance of laboratory equipment, quality controls, urinalysis, and microbiology will be covered in theory and simulated labs. Restricted to the following majors: Medical Assistant AAS and diploma. (Prerequisites: HLTH 1005, HLTH 1040, ENGL 1107 or ENGL 2105 and require instructor approval.) (Co-requisites: MAST 2600)

MAST 1700 Clinical Procedures I, 3 credits
This course is designed to teach the fundamentals of Medical Assisting in Family Practice, Internal Medicine, and Obstetrics and Gynecology (OB/GYN) and Pediatrics. Medical and surgical asepsis, microbial control, autoclaving, bandaging, instrument identification, minor surgery, medical examination of the patient, documentation, and vital signs will be discussed. Restricted to the following majors: Medical Assistant AAS and diploma. (Prerequisites: HLTH 1005,

HLTH 1040 and ENGL 1107 or 2105 and required instructor approval.) (Co-requisites: MAST 2700)

MAST 2300 Medical Administrative II, 2 credits
Students will simulate being a medical office receptionist. Students will utilize skills they learned in Medical Administrative I. (Co-requisites: MAST 1300; Restricted to the following majors: Medical Assistant AAS and diploma)

MAST 2400 Pharmacology II, 2 credits
Pharmacology II is designed to continue the study of pharmacology by continuing to use drug information sources. This course will study drug actions, side effects, cautions and patient education as they relate to each body system. (Co-requisite: MAST 1400; Restricted to the following majors: Medical Assistant AAS and diploma)

MAST 2600 Laboratory II, 4 credits
Laboratory skills are continued in this course. Hematology, coagulation, serology, and chemistry will be discussed and performed in a simulated lab setting. Phlebotomy and capillary punctures will also be discussed and taught. Restricted to the following major(s): Medical Assistant AAS and diploma. (Prerequisites: HLTH 1005, HLTH 1040, ENGL 1107 OR ENGL 2105 and required instructor approval.) (Co-requisites: MAST 1600)

MAST 2700 Clinical Procedures II, 3 credits
This course is designed to cover the fundamentals of drug administration, nutrition, emergency medicine, casting, and fracture care. Physical therapy, geriatrics, and patient education will also be discussed. restricted to the following majors: Medical Assistant AAS and diploma. (Prerequisites: HLTH 1005, HLTH 1040, ENGL 1107 OR ENGL 2105 and required instructor approval.) (Co-requisites: MAST 1700)

MAST 2900 Externship, 7 credits
This course is designed to provide on-the-job experience. The student will be assigned to work in a physician's office (without compensation) for a total of 320 hours. The student will work under the supervision of clinic personnel performing clinical, laboratory, and administrative duties pertinent to the student's technical training. (Restricted to the following majors: Medical Assistant AAS and diploma and instructor approval required.)

Mathematics

MATH 0801 Basic Math, 4 credits
This course provides an overview of the use of whole numbers, fractions, decimals, and percents. In addition, the topics of ratio, proportion, measurement, area, perimeter, and algebraic equations will be introduced. Course content will include the application of basic math skills to the solution of occupational situation problems. The course is designed for students who wish to review and improve their basic math skills. (Prerequisites: None)

MATH 0900 Elementary & Intermediate Algebra, 5 credits
This course provides students with those skills and insights from algebra which are necessary to perform well in any college-level mathematics course. Topics include signed numbers, the problem solving pro-

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cedure, performing arithmetic operations on algebraic expressions and polynomials, factoring polynomials, using negative exponents and scientific notation, solving and graphing linear equations and inequalities, graphing other relations, solving literal equations and apply formulas, solving systems of equations, solving quadratic, exponential equations, and analyzing functions. (Prerequisites: MATH 0801 or appropriate score on placement test)

MATH 0950 Topics in Intermediate Algebra, 2 credits
This course is a continuation from Elementary Algebra and is designed to expose the student to higher level topics in Algebra. Topics include systems of equations, radical equations, relations and functions, inverse functions, quadratic equations, graphs of functions, and exponential functions. (Prerequisites: Appropriate score on Elementary Algebra placement test)

MATH 1010 Dosage Calculations for Health Care Professionals, 1 credit
The course will include the different systems of measurement (metric and household) and the different equivalents of measure used to convert between the systems. The ratio-proportion method will be emphasized to set up and solve basic dosage calculations, dosage calculations involving conversions, and calculations to reconstitute medications. IV calculations will be performed to calculate drops per minute and milliliters per hour of the prescribed IV solution to be administered. Calculations for adult and pediatric dosages based on body weight will be performed. (Prerequisites: Meet Accuplacer score of 81 or higher OR have obtained a B or better in MATH 0801 Basic Math, prior to enrolling in the course)

MATH 1020 Math for Healthcare, 2 credits
The student will learn the different systems of measurement (metric, apothecary, and household) and the different equivalents of measure used to convert between the systems using labs to practice the skills. The ratio-proportion and dimensional analysis methods will be used to set up and solve basic dosage calculations, dosage calculations involving conversions, and calculations to reconstitute medications. IV calculations will be performed using IV formulas to calculate drops per minute and milliliters per hour of prescribed IV solution to be administered. Calculations for adult and pediatric dosages based on body weight and body surface area will be performed. The student will practice intake/output problems. If time permits, the student will learn about preparation of solutions, dilutions and solids. (Prerequisites: Meet Accuplacer score of 81 or higher OR have obtained a "C" or better in MATH 0801 Basic Math, prior to enrolling in the course.)

MATH 1070 Technical Mathematics I, 3 credits
This course is a combination of applied algebra and geometry. The content includes solving mathematical problems involving signed numbers, algebraic expressions, linear equations, graphs of linear and non- linear functions, exponents, scientific notation, and systems of measurement with unit analysis. Geometry topics include solving problems utilizing areas and volumes, similar triangles and the Pythagorean Theorem. Applications for technical trades will be emphasized. (Prerequisites: MATH 0801 or appropriate score on placement test)

MATH 1080 Technical Mathematics II, 2 credits
This course is a combination of plane and circle geometry and right and non-right triangle trigonometry. Topics covered include solving mathematical problems by applying plane and circle geometry postulates. Right triangle trigonometry and non-right triangle trigonometry will also be covered, including the laws of sine and cosine. Practical applications for technical trades, including layout problems, will be emphasized. (Prerequisites: MATH 1070 or appropriate algebra Accuplacer score)

MATH 1400 Algebra & Trigonometry, 5 credits
This course combines material taken from algebra and trigonometry. Topics covered include signed numbers, exponents, algebraic expressions, solving equations, proportion, variation, and systems of measurement. Graphs, scientific and engineering notation, and unit analysis will be used. Right triangle trigonometry applications and trig functions in any quadrant will also be included. Special attention will be given to vectors and sine wave analysis. Applications for technical trades will be included in the course curriculum. (Prerequisites: MATH 0801 or appropriate score on placement test)

MATH 1500 (MnTC 4) Mathematical Ideas, 3 credits
This course build a mathematical foundation in logic , set theory, geometry, finance, probability, and statistics for decision making. Emphasis will be placed on using higher order problem solving skills to solve real-life problems. (Prerequisites: MATH 0900, or MATH 0950, or MATH 1080, or MATH 1400, or appropriate score on algebra placement test.) (MN Transfer Goal 4) (3 Credits Lecture/0 Credit Lab)

MATH 1550 (MnTC 4) Introduction to Statistics, 4 credits
This course is an introduction to the principles of statistics, and data analysis using real-world problems. Topics include descriptive statistical measures, probability, graphs and distributions, hypothesis testing, correlation, and linear regression, and inferential statistics. (Prerequisites: MATH 0900, or MATH 0950, or MATH 1080, or MATH 1400, or appropriate score on algebra placement test) (MN Transfer Goal 4) (4 Credits Lecture/0 Credit Lab)

MATH 1600 (MnTC 4) College Algebra, 4 credits
This MN Transfer course is an extension of concepts learned in Elementary and Intermediate Algebra. The course includes analyzing and graphing functions and function inverses including polynomial, radical, rational, exponential, and logarithmic functions. Additional topics are systems of equations and inequalities, conic sections, and matrix algebra. Supplementary topics may include sequences, series, and probability. (Prerequisites: MATH 0900, or MATH 0950, or MATH 1080, or MATH 1400, or appropriate score on placement test.) (MN Transfer Goal 4) (4 Credits Lecture/0 Credit Lab)

MATH 1650 (MnTC 4) College Trigonometry, 3 credits
This course includes the topics of trigonometric functions and right triangle trigonometry, graphs of the trigonometric functions, trigonometric equations and identities, inverse trigonometric functions, laws of sines and cosines, vectors, trigonometric forms of complex numbers, De Moivre's Theorem, and polar and parametric equations and their graphs. (Prerequisites: MATH 0900, or MATH 0950, or MATH 1080, or MATH 1400, or appropriate score on placement test.) (MN Transfer Goal 4) (3 Credits Lecture/0 Credit Lab)

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MATH 1700 (MnTC 4) Pre-Calculus, 5 credits
This MN Transfer course is an extension of concepts learned in Elementary and Intermediate Algebra. The course consists of topics from College Algebra and College Trigonometry. It is intended for students who have had three years of high school math, including trigonometry. The course includes analyzing and graphing functions and function inverses including polynomial, radical, rational, exponential, and logarithmic functions. It also includes systems of equations and inequalities, and matrices. Additional topics are trigonometric functions and right triangle trigonometry, graphs of the trigonometric functions, trigonometric equations and identities, inverse trigonometric functions, laws of sines and cosines, vectors, and trigonometric forms of complex numbers, Supplementary topics may include conic sections, sequences, series, and probability. (Prerequisites: MATH 0900, or MATH 0950, MATH 1080, or MATH 1400, or appropriate score on placement test) (MN Transfer Goal 4) (5 Credits Lecture/0 Credit Lab)

Mechanical Drafting and Design

MECH 1200 Mechanical CAD I, 4 credits
This is the introductory Computer Aided Drafting (CAD) course covering the current version of AutoCAD as a technical drafting tool and operational techniques related to its use. The course will concentrate on drawing set-up, fundamental construction techniques, fundamental dimensioning and plotting. (Prerequisites: None)

MECH 1216 Drafting Standards, 5 credits
This covers the basic concepts of engineering drawings and uses sketching as a drafting tool to understand industry drafting and design standards. Topics included are multi-view drawings, fundamental dimensioning practices, symbols identification, fasteners, and other standardized details. (Prerequisites: None)

MECH 1229 Materials & Processes, 3 credits
This course covers various engineering materials and their properties as well as manufacturing processes using those materials. The course has a focus on identifying the best material and manufacturing process to satisfy the product design criteria. (Prerequisites: None)

MECH 1235 Statics and Strengths of Materials, 4 credits
Analysis of forces on structural and mechanical systems is introduced; topics included resultants of force systems, algebraic and graphical conditions of equilibrium of force systems, and analysis of forces acting on structural frameworks. Coverage of strengths includes the mechanical and physical properties of materials such as stress, strain, and modulus of elasticity appropriate to mechanical design problems. Applications include the analysis and design of structural joints, beams, and columns. (Prerequisite: MATH 1080. or Accuplacer College-level Math 50 or appropriate test score.)

MECH 1245 Sheet Metal Concepts and Applications, 3 credits
This course covers the concepts and application of sheet metal product design. Concepts include descriptive geometry and pattern development. Sheet metal parts, assemblies, and drawings are created using computer aided design (CAD) software. (Prerequisites: MECH 1216 and MECH 2064 or MECH 2074 or MECH 2084)

MECH 2035 Process Design Drafting, 3 credits
This course covers drafting topics related to manufacturing, including but not limited to, engineering change process, welding drawings, casting drawings, electrical drawings, and power transmission concepts and drawings. (Prerequisites: MECH 2064 or MECH 2074 Or MECH 2084 and MECH 1216)

MECH 2045 Design Projects, 4 credits
This course stresses the design procedures, such as layout and design, detailing parts, checking and final assembly in a team concept. Strength of material concepts are used to meet industry standards.
Trigonometry is used to solve design problems with all concepts well documented. Instruction and discussion of the general principles of employee/employer relationship concepts and creating a resume and cover letter are a part of this course. Students will participate in a tem project that explores the effect of modern social networking on industry. (Prerequisites: READ 0900, or appropriate placement score and ENGL 0102, or appropriate placement score, MECH 2064 or MECH 2074 or MECH 2084)

MECH 2055 Geometric Dimensioning and Tolerancing, 3 credits
This course covers terms, symbols, and their applications as related to function and relationship in the design process. Drawings will be produced using concepts covered in the course. Geometric dimensioning and tolerancing (GD&T) per recent industry standards will be covered. (Prerequisite: MECH 1216 and MECH 2064 or MECH 2074 or MECH 2084)

MECH 2064 Introduction to Inventor, 4 credits
This course covers basic part and assembly modeling techniques, using the latest Inventor computer aided design (CAD) software from Autodesk. Topics will include, but not limited to, sketching, 3D part modeling, assembly modeling, detail drawings, and working drawings. (Prerequisites: None)

MECH 2074 Solidworks, 4 credits
This course covers basic part and assembly modeling techniques using the latest SoildWorks computer aided design (CAD) software from Dassault Systems. Topics will include, but not be limited to, sketching, 3D part modeling, assembly modeling, detail drawings, and working drawings. (Prerequisites: None)

MECH 2080 Special Projects, 2 credits
This course provides the opportunity to advance industry sills. The students work in an applied drafting environment to achieve objectives mutually agreed upon with the instructor. (Prerequisites: MECH 1216 and MECH 2064 or MECH 2074 or MECH 2084)

MECH 2084 Introduction to ProE/Creo, 4 credits
This course covers basic part and assembly modeling techniques using the latest computer aided design (CAD) software from PTC (ProE/CREO). Topics will include, but not be limited to, sketching, 3D part modeling, assembly modeling, detail drawings, and work drawings. (Prerequisites: None)

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MECH 2090 Advanced CAD, 3 credits
This course covers advanced parametric solid modeling concepts, techniques, and software-specific features and functionality. The course will explain and demonstrate various modeling techniques, basic finite elements analysis (FEA), and assembly motion/animation. (Prerequisite: MECH 1216, and MECH 2064, or MECH 2074, or MECH 2084.)

Natural Science

NSCI 1020 (MnTC 3, 10) Plant Science, 3 credits
This course is an overview of the taxonomic, structural, and growth characteristics of higher living plants. An understanding of plant structure and their growth processes is a cornerstone to all other horticulture knowledge. Topics covered include plant structure, plant classification, plant growth processes and basic genetic principles. (Prerequisites: None) (2 Credits Lecture/1 Credit Lab)

NSCI 1030 (MnTC 3, 10) Introduction to Environmental Science, 3 credits
This MN Transfer course is an introductory class to Environmental Science. It is designed to familiarize the student with key environmental issues. The student will gain a better understanding of natural systems and how humans interact and steward those systems. Simulations, Laboratories, and field experiments will be a part of the learning and the student will interpret, evaluate and communicate their findings both orally and in writing. (Prerequisites: None) (2 Credits Lecture/1 Credit Lab)

Practical Nursing

NURS 1400 Foundations of Nursing, 3 credits
Foundations of Nursing introduces the student to the role of the practical nurse in health care. A theoretical foundation for basic assessment, nursing skills, and beginning framework for decision making is provided. (Prerequisites: Must be accepted into the Practical Nursing program for the current semester. Co-requisites: Current enrollment or successful completion of HLTH 1005, MATH 1010, NURS 1405, NURS 1410, NURS 1420, NURS 1430, and NURS 1440.)

NURS 1405 Nursing Interventions I: Lab, 2 credits
Nursing Interverntions I: Lab introduced to basic assessment and nursing skills, including techniques of administering medications and calculating dosages using critical thinking skills. (Prerequisites: Must be accepted into the Practical Nursing program for the current semester. Co-requisites: Current enrollment or successful completion of HLTH 1005, MATH 1010, NURS 1400, NURS 1410, NURS 1420, NURS 1430, and NURS 1440.)

NURS 1410 Health Promotions Across the Lifespan I, 4 credits
Health Promotion Across the Lifespan I examines pathophysiological conditions affecting patients from childhood to older adults. The nursing process is emphasized with the integration of the principles of therapeutic communication, nutrition and pharmacological interventions in promoting the health of patients across the lifespan. Specific emphasis includes critical thinking and nursing judgment in patient care. (Prerequisites: Must be accepted into the Practical Nursing program for the current semester. Co-requisites: Current enrollment or successful completion of HLTH 1005, MATH 1010, NURS 1400, NURS 1405, NURS 1420, NURS 1430, and NURS 1440.)

NURS 1420 Clinical Application I, 2 credits
Clinical Application I will use the nursing process to implement safe, patient relationship-centered care to individuals across the lifespan and through the wellness-illness continuum. The assess and collection of data, implementation of skills, document of findings, and reinforcement teaching plans for individual patients is emphasized. The course assists in the development of effective communication skills while working with individual patients and interprofessional team members in a simulated lab setting with clinical application. (Prerequisites: Must be accepted into the Practical Nursing program for the current semester. Co-requisites: Current enrollment or successful completion of HLTH 1005, MATH 1010, NURS 1400, NURS 1405, NURS 1410, NURS 1430, and NURS 1440.)

NURS 1430 Psychosocial Nursing, 1 credit
Psychosocial Nursing focuses on the care of patients with psychiatric or behavioral conditions while promoting and maintaining the mental health of individuals. The nursing process is emphasized with the integration of the principles of therapeutic communication and pharmacological interventions in promoting the health of individual patients across the lifespan. (Prerequisites: Must be accepted into the Practical Nursing program for the current semester. Co-requisites: HLTH 1005, MATH 1010, NURS 1400, NURS 1405, NURS 1410, NURS 1420, and NURS 1440.)

NURS 1440 Nursing Perspectives on Aging, 1 credit
Nursing Perspectives on Aging examines the unique psychological, physiological, social, and emotional aspects of human aging. Specific emphasis includes functional assessment, critical thinking, and nursing judgement in the care of the aging adult. (Prerequisites: Must be accepted into the Practical Nursing program for the current semester. Co-requisites: Current enrollment or successful completion of HLTH 1005, MATH 1010, NURS 1400, NURS 1405, NURS 1410, NURS 1420, and NURS 1430.)

NURS 1500 Transition to Nursing Practice, 2 credits
Transition to Nursing Practice facilitates the transition from student nurse to entry level practical nurse. Application of the nursing process and the use of therapeutic communication, prioritizing, decision-making, goal-setting, and critical thinking skills are emphasized through small group discussions and clinical based scenarios. Ethical, legal and moral issues, state licensure requirements and nursing practice standards for the Licensed Practical Nurse are examined. (Prerequisites: HLTH 1005, MATH 1010, NURS 1400, NURS 1405, NURS 1410, NURS 1420, NURS 1430, and NURS 1440. Co-requisites: Current enrollment or successful completion of ENGL 1107, NURS 1511, NURS 1515, NURS 1521, and NURS 1541.)

NURS 1511 Health Promotion Across the Lifespan II, 4 credits
Health Promotion Across the Lifespan II continues to examine pathophysiological conditions affecting patients from childhood to older adults. The nursing process is emphasized with the integration of the principles of therapeutic communication, nutrition, and pharmacological interventions in promoting the health of patients across the lifespan. Specific emphasis includes advanced critical thinking and nursing judgment in patient care. A theoretical foundation of advanced nursing skills. (Prerequisites: HLTH 1005, MATH 1010, NURS 1400,

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NURS 1405, NURS 1410, NURS 1420, NURS 1430, and NURS 1440. Co-requisites: Current enrollment or successful completion of NURS 1500, NURS 1515, NURS 1521, NURS 1541.)

NURS 1515 Nursing Interventions II: Lab, 2 credits
Nursing Interventions II: Lab introduces advanced nursing skills in the laboratory setting. Specific emphasis includes advanced critical thinking, nursing judgment in patient care, and the performance of advanced nursing skills. (Prerequisites: HLTH 1005, MATH 1010, NURS 1400, NURS 1405, NURS 1410, NURS 1420, NURS 1430 and NURS 1440.) (Co-requisites: Current enrollment or successful completion of ENGL 1107, NURS 1500, NURS 1511, NURS 1521, and NURS 1541.)

NURS 1521 Clinical Application II, 6 credits
Clinical Application II will use the nursing process to implement safe, patient relationship-centered care to patients across the life span and through the wellness-illness continuum. Problem solving, prioritization, focused nursing assessments, evidenced-based nursing interventions, and critical thinking skills are demonstrated and applied. Emphasis is placed on developing leadership qualities in the provision of patient care. (Prerequisites: HLTH 1005, MATH 1010, NURS 1400, NURS 1405, NURS 1410, NURS 1420, NURS 1430, and NURS 1440. Co-requisites: Current enrollment or successful completion of ENLG 1107, NURS 1500, NURS 1511, NURS 1515, NURS 1530, NURS 1541.)

NURS 1541 Maternal Child Nursing, 2 credits
Maternal Child Nursing provides a foundation in the care of patients during the prenatal, intrapartum, and postpartum period. The nursing care of well and compromised neonates and children will be explored. The nursing process is emphasized with the integration of the principles of therapeutic communication and pharmacological interventions in promoting the health of patients. Specific emphasis includes critical thinking and nursing judgment. (Prerequisites: HLTH 1005, MATH 1010, NURS 1400, NURS 1405, NURS 1410, NURS 1420, NURS 1430, and NURS 1440. Co-requisites: Current enrollment or successful completion of ENGL 1107, NURS 1500, NURS 1511, and NURS 1521.)

Philosophy

PHIL 1200 (MnTC 9) Technology, Ethics and Society, 3 credits
This course is a practical overview of the key issues and questions related to the ethical use of technology. The course will survey the major ethical theories and explore the general relationship between society's ethical standards and emerging technologies. Further inquiry will identify the impact technology has on current ethical and social issues surrounding such areas as information technology, healthcare, business, nanotechnology, government, artificial intelligence/robotics and whistleblowing. (Prerequisites: None)

Psychology

PSYC 1406 (MnTC 5) General Psychology, 4 credits
This course is designed to provide students with a broad introduction to the scientific study of mental processes and behavior. Emphasis is placed on basic psychological principles and theories, both historical and modern, relevant to topics such as research methodology, bio-logical psychology, consciousness, behavior learning, memory, intelligence, personality, social psychology, psychological disorders, and psychological therapies. (Prerequisites: None) (4 Credits Lecture/0 Credit Lab)

PSYC 1506 (MnTC 5) Lifespan Development, 4 credits
Lifespan Development addresses major theories of human development. The interdependence of physical, cognitive and social development throughout the lifespan is examined. Particular emphasis is placed on Erikson, Sears, Piaget and adult developmental research. Integration of interpersonal and written communication skills, as well as critical thinking will be included. (Prerequisites: None) (4 Credits Lecture/0 Credit Lab)

PSYC 1510 (MnTC 5) Classic Studies in Psychology, 1 credit
This course takes students through a review of psychology's major theoretical perspectives, and research methods, design, and ethical guidelines through the use of research studies published in the twentieth century. This course also examines these early research studies for their contribution to understand human behavior and the advancement of the field of psychology as a credible science. This course is intended for students who have completed an introductory psychology course. (Prerequisites: None)

PSYC 1606 (MnTC 5) Abnormal Psychology, 4 credits
This course explores the nature and causes of abnormal behavior. Emphasis is placed on the major categories used to classify abnormal behavior, along with the diagnostic criteria used. Various mental illnesses, such as depression, schizophrenia, anxiety, and eating disorders are discussed. (Prerequisites: PSYC 1406 General Psychology) (4 Credits Lecture/0 Credit Lab)

Reading

READ 0900 Reading Skills, 4 credits
Students in this course will build reading skills for success in technical programs and life-long learning. In order to improve comprehension, students will learn to identify main ideas, organizational patterns, and supporting details. Students will gain mastery over new vocabulary through using word parts, context clues, and the dictionary. In addition, students will gain an awareness of the reading process and analyze their reading and study habits. Students will apply critical reading and thinking skills to various texts, such as magazines, fiction, essays, and college textbook chapters. (Prerequisites: A score of 40 on the Accuplacer Reading Comprehension.)

READ 0960 Preparing for College Reading, 2 credits
This course focuses on the critical reading and thinking skills necessary to comprehend, analyze, and interpret college-level material. It also emphasizes college-study strategies within the scope of college-level reading materials. (Prerequisites: The course requires a score of 66-77 on Accuplacer Reading Comprehension. Co-requisites: This course must be taken concurrently with ENGL 0960. Students may take this course without ENGL 0960 with instructor permission.)

A grade of C or higher in this course is required to register for ENGL 1107: Composition, ENGL 1110: Research Project, or ENGL 2105: Business and Technical Writing

Supervisory Management

SMGT 1600 Management Education Planning, 2 credits
This course guides the student through an individualized education plan for the Supervisory Management Program. Students will address their personal and professional goals. Students will be exposed to the accelerative learning methodology. (Prerequisites: None)

SMGT 1602 Supervision Fundamentals, 3 credits
This course provides the student with current principles, concepts, responsibilities, and practical application skills fundamental to success as a supervisor. Student will participate in hands-on projects in class and at work, dealing with leadership, communication, employee motivation, delegation, planning, problem solving, organizing, and controlling. Emphasis will be on achieving organization effectiveness and individual success by working with and empowering others. (Prerequisites: None)

SMGT 1604 Interpersonal Skills/Customer Service, 2 credits
This course provides the learner with concepts and tools to learn and demonstrate interpersonal skills in the workplace. Participants will identify and demonstrate skills specific to supervisory responsibilities such as providing feedback, collaborating with peers, dealing with conflict, gaining support from others, and getting ideas across. In addition, participants will learn to listen effectively, discover how to give clear directions, explore the emotional barriers to effective communication and develop strategies for working with difficult situations. Emphasis will be placed on creating a culture supportive of making customer and focused decisions and motivating others to service excellence. (Prerequisites: None)

SMGT 1606 Managing Change & Conflict, 2 credits
This course provides students with tools and techniques to keep pace with the rapid and dramatic changes in the workplace today. Participants will learn to become a change leader by effectively identifying and overcoming resistance to change by creating a work environment where change is expected and viewed as positive. This course will focus on providing students with the tools necessary to lead their work groups through the change process. (Prerequisites: None)

SMGT 1608 Personal Leadership, 3 credits
This course will provide the student with the tools and strategies needed to increase personal productivity from which they can more effectively solve problems and develop strong personal and professional relationships. Course content includes time management, stress management, and the personal habits of effective people. (Prerequisites: None)

SMGT 1610 Field Study I- Supervisory Leadership, 2 credits
This course is designed to challenge the participant to apply the content of the Supervisory Leadership Certificate to a problem, challenge or situation in the workplace. Participants will demonstrate this application of knowledge to their classmates as well as to the course instructor. The advisor must approve the field project. Student outcomes of the field project will be designed by the student to enhance their workplace skills and must be directly related to course content in the Supervisory Leadership Certificate. (Prerequisite: None)

SMGT 1612 Human Resource Management, 3 credits
This course focuses on human resource areas of the supervisor's work. Employee recruitment, selection, and orientation methods are presented. Topics will include diversity, ethics, safety, and workplace violence issues, job descriptions, and labor movement and union issues. Equal employment opportunity and affirmative action programs are presented. (Prerequisites: None)

SMGT 1614 Performance Management, 3 credits
In this course, students will learn procedures for setting performance standards, measuring results, and reviewing performance with employees. Students will learn sills needed for documenting performance, and conducting performance appraisals, including planning for the review meeting, developing performance improvement plans, and conducting periodic progress reviews. Progressive discipline methods are reviewed. Coaching and constructive feedback skills are reviewed. (Prerequisites: None)

SMGT 1616 Employment Law, 2 credits
This course allows the participant to examine workplace issues impacting supervisory responsibilities such as employee hiring decisions, discrimination, unemployment compensation, worker's compensation, Fair Labor Standards Act, employee safety and health, workplace harassment, documentation and termination. (Prerequisites: None)

SMGT 1618 Employee Training & Coaching, 3 credits
This course focuses on practical application skills in developing training and conducting coaching for improved employee performance. Students will learn specific coaching strategies of tutoring, mentoring, counseling, and confronting. Student will learn how to assess training needs, design training interventions, deliver training, and evaluate impact of training programs. Adult learning principles are reviewed. Methods for transfer of training are presented. (Prerequisites: None)

SMGT 1620 Work Teams & Facilitation Skills, 2 credits
This course will focus on the practical application of skills necessary for effective team development and leadership as well as the skills necessary for the supervisor to plan, prepare, conduct and evaluate productive meetings. (Prerequisites: None)

SMGT 1622 Field Study II- Human Resources, 2 credits
This course is designed to challenge the participant to apply the content of the Human Resources Certificate to a problem, challenge or situation in the workplace. Participant will demonstrate this application of knowledge to their classmates as well as to the course instructor. The advisor must approve the field project. Students outcomes of the field project will be designed by the student to enhance their workplace skills and must be directly related to course content in the Human Resource Certificate. (Prerequisites: None)

SMGT 1624 Quality Tools & Creativity, 3 credits
In this course, students will learn methods, models, and principles of quality management in organizations. They will learn the use of multi-

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ple tools for quality and continuous improvement interventions. Methods for measuring and reporting quality improvements are reviewed. Students will use techniques to capitalize on their innate creative abilities. (Prerequisites: None)

SMGT 1626 Management of Safety, 2 credits
This course will provide the participant with regulations and guidelines set by OSHA, MPCA, etc. for maintaining worker safety and rules compliance in the workplace. Supervisory responsibility in safety training, reporting, communication, industrial hygiene, motivation, and enforcement of policies will be emphasized. Other areas of importance, including workers' compensation, cost control, accident investigation techniques and policy and program development will be covered. (Prerequisites: None)

SMGT 1628 Documentation/Written Communication Skills, 2 credits
This course provides students with the skills necessary for supervisors to effectively and accurately document employee performance and communicate with employees using a variety of written formats. The course emphasizes the importance of determining the "who, what, where, when, and why" of workplace issues, so that they are documented accurately and completely. Providing written performance feedback, conducting workplace investigations, preparing formal reports, and documenting disciplinary incidents are covered. (Prerequisites: None)

SMGT 1630 Field Study III, 2 credits
This course is designed to challenge the participant to apply content of the Quality Certificate to a problem, challenge or situation in their workplace. Participants will demonstrate this application of knowledge to their classmates as well as to the course instructor. The advisor must approve the field project. Student outcomes of the field project will be designed by the student to enhance their workplace skills and must be directly related to course content in the Quality Certificate. (Prerequisites: None)

SMGT 2600 Accounting for Non-Financial Managers, 2 credits
This course provides students with the financial management planning tools and control methods necessary for supervisors. The supervisory roles of budgeting, forecasting, cost containment, and budget management are covered. Fiscal decision making methods are reviewed. Planning and control practices are presented. (Prerequisite: None)

SMGT 2602 Project Management/Problem Solving, 3 credits
This course focuses on how to lead project teams and problem solving interventions. The student will learn how to lead teams through problem solving process. The course focuses on project management preparation, the use of project management tools, and how to manage complex projects with specific starting and ending points. Emphasis is on managing projects with multiple simultaneous actives and dimensions. (Prerequisites: None)

SMGT 2604 Leadership Development, 2 credits
This course provides the student with leadership methods, concepts, and tools to enhance and improve the ability to inspire and influence others. Emphasis is on leading others by creating positive and powerful relationships based on principles and values. The student will complete a personal leadership action plan. (Prerequisites: None)

Social Science

SOSC 1010 (MnTC 5, 7) Introduction to Sociology, 3 credits
This course is an introduction to sociology as a way of understanding the world. Sociology is a field of study that explains social, political, and economic phenomena in terms of social structures, social forces, and group relations. The course will introduce students to the field by focusing on several important sociological topics, including socialization, culture, the social construction of knowledge, inequality, race and ethnic relations, poverty, and political sociology. (Prerequisites: None)

SOSC 2000 (MnTC 5) Sociology of Work, 4 credits
Introduction to social science through studying how people work. Articles from several disciplines will be studied including those from economics, history, sociology, and others. Topics discussed will include the work ethic, changing roles of men and women in the work force, unionism, moving from agrarian to industrial to information societies, globalization and effects on leisure time. (Prerequisites: None)

Speech

SPCH 1120 (MnTC 1) Public Speaking, 3 credits
This is an introductory speech course that focuses on the process of formal public speaking, with emphasis on comfortable and effective delivery of speeches. This course is designed to provide students with basic theories and skills that are essential to effective public speaking. Students will deliver both informative and persuasive speeches in a variety of public speaking situations. Each student will also learn to analyze, critique, and evaluate the speeches of others. Videotaping and self-assessment are integral components of this class. Additional course work will include studying the group process, impromptu speaking, and dramatic reading. This course depends on student performance and active participation. (Prerequisites: None)

SPCH 1200 (MnTC 1, 7) Interpersonal Communication, 3 credits
This course is designed to facilitate an understanding of the communication context, concepts, and skills involved in day-to-day interaction. Emphasis is on such topics as awareness, self-concept, perception, attitude, cultural differences and similarities, and relational and self-development. This course focuses on developing communication understand, including language, speaking, non-verbal communication, conflict resolution, male-female communication, and listening techniques. (Prerequisites: None)

SPCH 1500 (MnTC 1, 7) Intercultural Communication, 3 credits
Speaking the same language does not guarantee effective communication when people come from different cultures. Increasing diversity in the workplace combined with the globalization of business require professionals to become better communicators across cultures. This course provides training in understanding the importance of intercultural communication and theories. Topics covered include: definitions of communication; definitions of culture and diversity of cultural patterns; cultural variables influencing communication, such as language, non-verbal behavior, perception, values, and beliefs; factors that facilitate or inhibit intercultural communication; and examination of American culture in comparison to other cultures. (Prerequisites: None)

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Surgical Technology

SURG 1003 Sterile Processing, 3 credits
The course will introduce various surgical instruments, the classification and use(s), including the process of cleaning, decontamination, disinfection, and sterilization of equipment and supplies used in the surgical services department. Distribution and management of supplies to all customer service areas is also addressed for health care settings. (Prerequisites: HLTH 1040 and BIOL 2100, Co-requisites: SURG 1005 and BIOL 2200)

SURG 1005 Surgical Microbiology, 2 credits
This course addresses natural and artificial body defense mechanisms and the methods by which infectious diseases are recognized, treated, transmitted, and prevented. Disinfection and sterilization are also included. Content covers the application of aseptic technique and various environmental controls. (Prerequisites: HLTH 1040 and BIOL 2100) (Co-requisites: SURG 1003 and BIOL 2200)

SURG 1010 Surgical Pharmacology, 2 credits
This course is designed to provide knowledge of various routes of drug administration, effects, and side effects. It will encompass a comprehensive knowledge of the many classifications of drugs. Also included will be instruction in the values for fluid and weight measures. Emphasis will be placed on legal and safety aspects of drug administration including a medication policy (Prerequisites: None).

SURG 1026 Operating Room Theory, 2 credits
Operating Room Theory will introduce concepts related to the surgical experience. Theory includes safe patient care, principles of aseptic technique, professional standards in the operating room environment and the perioperative process. (Prerequisites: Successful completion of the Sterile Processing certificate)

SURG 1027 Operating Room Techniques, 4 credits
Operating Room Techniques teaches the basic practical concepts, principles, skills, and professional standards required for clinical practice. This course must be completed the semester prior to clinical. (Prerequisites: None) (Co-requisites: SURG 1010, SURG 1026 and SURG 1035)

SURG 1035 Operating Room Procedures I, 4 credits
This course introduces concepts of basic procedures performed in the operating room. Included will be anatomy, illness/abnormalities, instrumentation, and the perioperative process. (Prerequisites: None) (Co-requisites: SURG 1010, SURG 1026 and SURG 1027)

SURG 1037 Operating Room Procedures II, 4 credits
This course will expand the concepts and procedures addressed in SURG 1035, OR Procedures I. Included will be anatomy, illness/abnormalities, instrumentation, and the perioperative process. (Prerequisites: SURG 1005, SURG 1010, SURG 1026, SURG 1027, and SURG 1035) (Co-requisites: SURG 2000)

SURG 2000 Operating Room Clinical, 16 credits
In this clinical laboratory course, the student will assist with selected procedures in a hospital setting. The course will implement skills learned in prior Surgical Technology theory and laboratory courses.

(Prerequisites: Successful completion of SURG 1010, SURG 1026, SURG 1027 and SURG 1035) (Co-requisites: SURG 1037)

Turf grass and Golf Course Management

TURF 1015 Soil Science and Fertility, 4 credits
This course is designed to provide information about soil as a plant growth medium, which acts as a reservoir of fertility and physical support of plant roots. Topics covered in this basic study of soils including physical, chemical, and biological properties of soils, soil classification, soil nutrients, soil nutrient action, fertilizer formulation, fertility plans, and fertilizer application. (Prerequisites: None)

TURF 1030 Plant Pests I, 3 credits
This course presents topics on weed classification and control measures and the safe and appropriate use of pesticides. Specific content areas include weed classification methods, weed structures, weed control methods, herbicide formulations, and modes of action, chemical application, pesticide laws-regulations, and safety. (Prerequisites: None)

TURF 1050 Woody Plants I, 3 credits
This course covers the characteristics and identification of deciduous and evergreen trees commercially available in the landscaping industry in the upper Midwest. Particular attention is placed on identification of the plant materials and the classification of these materials according to cultural and landscape use characteristics. Proper planting and pruning as well as site selection in the landscape and golf course will also be covered. (Prerequisites: None)

TURF 1060 Woody Plants II, 3 credits
This course covers the characteristics and identification of deciduous shrubs grown in the upper Midwest. Particular attention is placed upon identification of the plant materials and the classification of these materials according to cultural and landscape use characteristics. Pruning, correct site selection, and planting will also be covered. Basic landscape uses and designs in golf course settings will also be discussed. (Prerequisites: None)

TURF 1210 Turfgrass & Grounds Management, 3 credits
This introductory course will present an integration of facilities operations, turfgrass theory, and effective and environmentally sound management practices. The production of high quality turfgrass requires specialized turf management skills. Understanding and utilizing these management skills allows individuals to maintain high quality turf on the playing field. Topics introduced to the students include the turfgrass management practices of cultivation, thatch control, mowing, spiking, golf course site maintenance, and their effects on our environment as well as introduction to the needs of the facility for effective operation. (Prerequisites: None)

TURF 1220 Introduction to Turfgrass Species, 3 credits
The development and culture of turfgrass is important in many societies for functional, recreational, and ornamental reasons. A thorough understanding of common turfgrasses and their culture is an important tool in the management of cultured turf. This course is designed to cover topics in turfgrass structures, growth processes, warm/cool season turfgrasses, cultural practices, and seed blends. (Prerequisites: None)

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TURF 1230 Landscape Construction, 3 credits
Landscape construction features are present in the landscape for functional and aesthetic value. The turf industry uses many different hardscape materials in their development. When properly designed and constructed, retaining walls, patios and walkways add character and value to any environmental landscape. Construction materials covered included brick, natural stone, concrete, wood and synthetic products. Topics presented in this course include the study of construction materials, construction theory and installation techniques. Actual projects will be constructed during the presentation of the course. (Prerequisites: None)

TURF 1241 Turfgrass Diseases, 3 credits
Turfgrass diseases may be caused by a wide variety of plant pathogens. By understanding the interactions between plant pathogens and the turf environment, you will be better able to successfully manage the culture of turfgrass. Topics covered in this course include the study of specific turfgrass diseases and their interaction with cultural practices. (Prerequisites: None)

TURF 1250 Golf Course Construction & Design, 3 credits
The knowledge and skills necessary to construct or renovate the components of a golf course are critical in enhancing the quality of both golf play and course layout. This comprehensive course will allow you to experience both the primary design principles as well as the actual construction of golf course greens, tees, fairways, roughs, and bunkers. (Prerequisites: None)

TURF 1255 Turf Power Equipment I, 2 credits
This course focuses on the operation and maintenance of small turf power equipment such as hand mowers, weed whips, chain saws, leaf blowers and sweepers. Topics covered will include troubleshooting small air cooled two and four stroke cycle engines, examining their operating principles, fuel systems, ignition systems, and lubrication systems. (Prerequisites: None)

TURF 1261 Turf Power & Equipment II, 2 credits
This course is designed to provide students with experience in turf equipment servicing procedures. Topics covered in this course include servicing of turf power equipment and drive trains, sharpening of rotary and reel mowers, maintaining hydraulic systems and components, and maintaining mowers, utility units, aerators, seeders, roto-tillers, and turf renovation equipment.(Prerequisites: None)

TURF 1270 Supervised Occupational Experience, 6 credits
The Golf Course and Turfgrass Management Supervised Occupational Experience (SOE) provides an opportunity for students to apply and integrate classroom and laboratory knowledge to actual work situations. The intent of the SOE is to provide a supervised work experience in order for students to build their expertise and proficiency with turf and grounds skills as well as enhance their own problem-solving abilities. The SOE structure allows for students to interact in at least one student-employer seminar. (Prerequisites: Successful completion of a minimum of 20 technical credits and has a minimum 2.0 GPA. Instructor approval required.)

TURF 1280 Golf Course Planning & Operations, 3 credits
This course covers golf course financial planning which is a critical work function of golf course superintendents. Understanding and analyzing golf course budget expenditures in order to develop sound financial plans requires both financial and critical thinking skills. This comprehensive course will allow the student to experience the breadth of golf course financial planning. Course topics include expenditure planning, equipment specification and purchasing, equipment supply cost projections, equipment parts and repair, fertilizer/pesticide cost and purchasing, irrigation supplies and cost, and budget preparation techniques. (Prerequisites: None)

TURF 1300 Irrigation Installation & Design, 3 credits
Irrigation Installation and Design is a course, which will allow the golf course and grounds management personnel to gain experience in the methods of installing and designing a full or sectional golf course irrigation system. Topics covered in this course include the installation of irrigation components and using the irrigation components to design a golf course irrigation system. (Prerequisites: None)

TURF 1310 Sports Turf Management, 3 credits
This course is designed to introduce students to the maintenance and construction of sports fields with an emphasis on football and baseball fields. Topics discussed include turfgrass species and cultivar selection, fertilizer programs, drainage systems, over seeding, irrigation, field safety, design and construction of sports fields, and budge proposal planning. (Prerequisites: None) (Lecture 3, Lab 0)

TURF 1515 Supervised Occupational Experience II, 3 credits
The Golf Course and Turfgrass Grounds Management Fall Supervised Occupational Experience (SOE) provides an opportunity for students to apply and integrate classroom and laboratory knowledge to specific work activities associated with late season grounds management. The intent of this SOE is to provide the student the opportunity to develop expertise and proficiency with turf and grounds skills not acquired during the spring SOE. Summer growing season and late-season management present special learning situations, problem solving opportunities, and student- employer interaction. The SOE structure is defined in the SOE guidelines. (Prerequisites: TURF 1270 with a grade of C or higher.)

Welding

WELD 1002 Math for Welders, 1 credit
Math skills are essential for welder who read blueprints, layouts, fit-up, fabricate or design welded structures. This course will review the basic math concepts required to be a successful welder. Topics covered will include addition, subtraction, multiplication and division of whole numbers, fractions and decimals. Direct measurement, computed measurement and stretch-outs are also included. (Prerequisites: None)

WELD 1004 Oxy-Fuel Applications, 1 credit
This course focuses on the hand skills, safety ,and knowledge needed to be proficient with oxy-fuel brazing and oxy-fuel cutting processes. Also covered are oxy-fuel track cutting, carbon arc gouging, plasma cutting and gouging. (Prerequisites: None, Co-requisites: WELD 1006)

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WELD 1006 Oxy-Fuel Processes, 1 credit
This course focuses on Oxy-Fuel safety and background knowledge needed to be proficient with oxy-fuel brazing and oxy-fuel cutting processes. (Prerequisites: None; Co-requisites: WELD 1004)

WELD 1008 Blueprint Reading I, 2 credits
This course covers basic lines, basic views, title block information, notes and specifications, dimensions, structural shapes, auxiliary views, section views, detailed and assembly prints, and welding symbols blueprint information. Application of blueprint reading will be applied to weld fabrication projects which include use of Gas Metal Arc Welding (GMAW), Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), and Oxy-Fuel cutting and brazing. (Prerequisites: None; Co-requisites: WELD 1014, WELD 1016, and WELD 1018)

WELD 1012 Processes & Power Sources I, 3 credits
This course covers the basic terminology, fundamentals, design and application of welding processes and power sources. (Prerequisites: None)

WELD 1014 Gas Tungsten Arc Welding I, 3 credits
This course focuses on the Gas Tungsten Arc Welding (GTAW) process, welding carbon and stainless steel fillet and groove welds in all positions. Gas Tungsten Arc Welding knowledge and safety are also covered. (Prerequisites: None ; Co-requisites: WELD 1012)

WELD 1016 Gas Metal Arc Welding I, 3 credits
This course covers hands-on training with the Gas Metal Arc Welding (GMAW) process, using short circuit transfer, spray transfer, and pulse spray transfer on carbon steels. Gas Metal Arc Welding safety, knowledge and variables are also covered. (Prerequisites: None; Co-requisites: WELD 1012))

WELD 1018 Shielded Metal Arc Welding I, 3 credits
This course covers hands on training utilizing the Shielded Metal Arc Welding (SMAW) process with 610 and 7018 filler metals on carbon steels in various positions. Shielded Metal Arc Welding knowledge and safety and process variables are also covered. (Prerequisites: None; Co-requisites: WELD 1012)

WELD 1022 Blueprint Reading II, 3 credits
This course covers and builds the hands-on skills that are essential to fabricate weldments from blueprints with multiple welding processes. The hands on course approach, teaches students how to visualize blueprints by actually building welding projects from them. Students will start by fabricating projects from very simple blueprints, while each blueprint the student receives will get more challenging. All blueprints will be introduced by the instructor. (Prerequisites: WELD 1008, Co-requisites: WELD 1028, WELD 1034, and WELD 1036)

WELD 1024 Metals Theory I, 2 credits
This course cover history of metals, everyday metal we use, metal testing methods, basics of metallurgy, mechanical properties, physical properties, and welding low, medium, and high carbon steels. (Prerequisites: WELD 1012)

WELD 1026 Process and Power Source II, 3 credits
This course covers processes such as Flux Core Arc Welding (FCAW) self-shielded and externally-shielded, Submerged Arc Welding (SAW), and Gas Metal Arc Welding (GMAW) of aluminum and stainless steel. Pulse spray vs. Pulse on Pulse welding setup and use is discussed as well as advanced Shielded Metal Arc Welding (SMAW) practices for plate welding. Inverter power source design function and application along with process consumables and shielding mediums will also be covered. (Prerequisites: WELD 1012)

WELD 1028 Gas Tungsten Arc Welding II, 3 credits
This course covers the Gas Tungsten Arc Welding (GTAW) process, welding aluminum fillet and groove welds in all positions. Gas Tungsten Arc Welding knowledge and safety are also covered. (Prerequisites: WELD, 1002, WELD 1004, WELD 1006, WELD 1008, WELD 1012, WELD 1014, WELD 1016, AND WELD 1018)

WELD 1034 Gas Metal Arc Welding II, 3 credits
This course covers hands-on training utilizing the Gas Metal Arc Welding (GMAW) process on stainless steel and aluminum fillet welds and Flux Cored Arc Welding (FCAW) on carbon steel. Gas Metal Arc Welding safety, knowledge, and variables are also covered. (Prerequisites: WELD 1002, WELD 1004, WELD 1006, WELD 1008, WELD 1012, WELD 1014, WELD 1016, and WELD 1018)

WELD 1036 Shielded Metal Arc Welding II, 3 credits
This course covers hands-on training utilizing 6010 and 7018 filler metals on carbon steels with the Shielded Metal Arc Welding (SMAW) process. This course starts in the vertical position on fillet joints and then concentrates on 1G, 2G, 3G, and 4G plates without backing strips. Backing strips will be used only as required. (Prerequisites: WELD 1002, WELD 1004, WELD 1006, WELD 1008, WELD 1012, WELD 1014, WELD 1016, and WELD 1018)

WELD 1209 Basic Pipe Welding, 5 credits
This course covers hands on training with the SMAW, GTAW and GMAW processes on carbon steel pipe. The focus of this course will be basic carbon steel pipe welding techniques in the 1G and 2G positions. Students will also learn how to level, quarter mark, cut, fit and weld basic pipe joints from hand drawn templates. This class is not intended to be an advanced pipe class and will adhere to the basics. AWS/ASME/API codes are followed throughout the course. (Prerequisites: MACH 1090, WELD 1001, WELD 1002, WELD 1003, WELD 1004, WELD 1006, WELD 1008, WELD 1011, WELD 1012, WELD 1014, WELD 1016, WELD 1018, WELD 1021, WELD 1022, WELD 1024, WELD 1025, WELD 1026, WELD 1028, WELD 1031, WELD 1034, WELD 1036, WELD 1101)
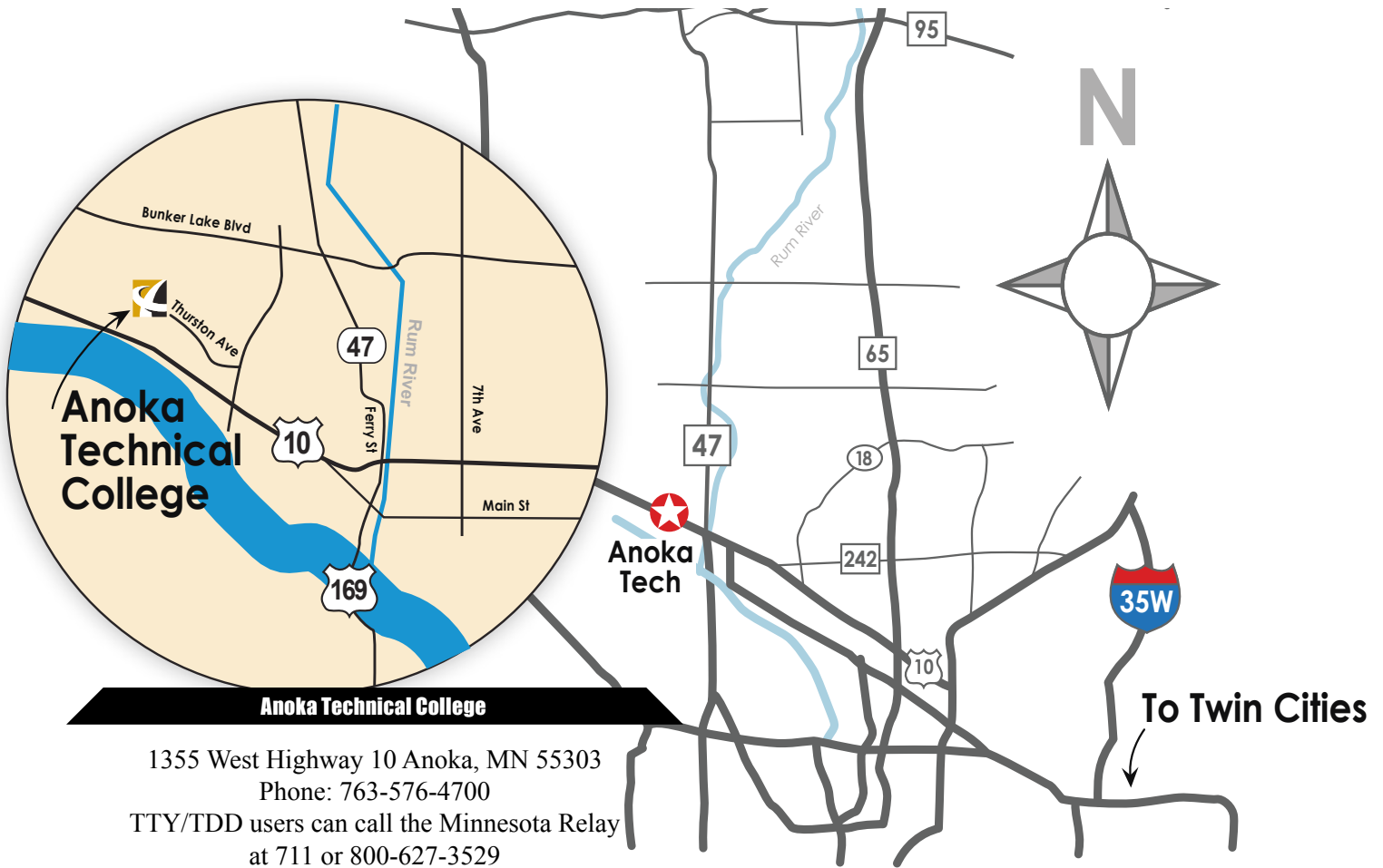
WELD 2000 Basic Pipe Layout, 3 credits
The focus of this course will be basic pipe layout techniques. Students will also learn how to level, quarter mark, cut, fit and weld basic pipe joints from hand drawn templates. This class is not intended to be an advanced pipe class and will adhere to the basics. (Prerequisites: MACH 1090, WELD 1001, WELD 1002, WELD 1003, WELD 1004, WELD 1006, WELD 1008, WELD 1011, WELD 1012, WELD 1014, WELD 1016, WELD 1018, WELD 1022, WELD 1024, WELD 1025, WELD 1026, WELD 1028, WELD 1034, WELD 1036)

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WELD 2004 Metals Theory II, 3 credits
This course covers picks up where Metals Theory I left off. Some of the things this course will cover are: the applications, metallurgy and welding procedures/repair procedures for austenitic ferritic-martensitic and precipitation hardening stainless steels, gray - white - malleable - ductile and alloy cast irons and tool steels. Aluminum, magnesium, austenitic manganese, titanium, buildup and hard-facing are among the other course content that will also be covered. (Prerequisites: WELD 1002, WELD 1002, WELD 1003, WELD 1004, WELD 1006, WELD 1008, WELD 1011, WELD 1012, WELD 1014, WELD 1016, WELD 1018, WELD 1021, WELD 1022, WELD 1024, WELD 1026, WELD 1028, WELD 1034 and WELD 1036

WELD 2006 Welding Code Interpretation, 2 credits
This course covers basic information and interpretation of AWS D1.1, ASME Section IX and API Standard 1104. Welding procedure qualification, welding performance qualification, extent of welder qualification, joint design, inspection and testing of welds, welding variables, and other information will also be covered.

WELD 2008 Blueprint Reading III, 4 credits
This course covers hands-on training with the SMAW, GTAW and GMAW processes on carbon steel pipe. The focus of this course will be basic carbon steel pipe welding techniques in the 1G and 2G positions. (Prerequisites: WELD 1002, WELD 1004, WELD 1006, WELD 1008, WELD 1012, WELD 1014, WELD 1016, WELD 1018, WELD 1022, WELD 1024, WELD 1025, WELD 1026, WELD 1028, WELD 1034 and WELD 1036)

WELD 2012 GMAW 5G and 6G Pipe Welding, 2 credits
This course covers hands on training utilizing the GMAW process on carbon steel pipe. The course focus will be, open root, fill and cover passes in the 5G & 6G positions. (Prerequisites: WELD 1002, WELD 1004, WELD 1006, WELD 1008, WELD 1012, WELD 1014, WELD 1016, WELD 1018, WELD 1022, WELD 1024, WELD 1026, WELD 1028, WELD 1034, WELD 1036, WELD 2000, WELD 2004, WELD 2006 and WELD 2008)

WELD 2014 GTAW 5G and 6G Pipe Welding, 5 credits
This course covers hands on training utilizing the GTAW process on carbon steel pipe. The focus of this course will be, open root, fill and cover passes being made with GTAW in the 5G and 6G positions. GTAW and SMAW will also be used in combination to weld carbon steel pipe in the 5G & 6G positions. (Prerequisites: WELD 1002, WELD 1004, WELD 1006, WELD 1008, WELD 1012, WELD 1014, WELD 1016, WELD 1018, WELD 1022, WELD 1024, WELD 1026, WELD 1028, WELD 1034, WELD 1036, WELD 2000, WELD 2004, WELD 2006 and WELD 2008)

WELD 2016 SMAW 5G & 6G Pipe Welding, 5 credits
This course covers hands on training utilizing 6010 and 7018 filler metals on carbon steel pipe with the SMAW (stick) process. The focus of this course will be, 6010 open root passes with fill and cover passes being made with both 6010 and 7018 electrodes in the 5G and 6G positions. (Prerequisites: WELD 1002, WELD 1004, WELD 1006, WELD 1008, WELD 1012, WELD 1014, WELD 1014, WELD 1016, WELD 1018, WELD 1022, WELD 1024, WELD 1026, WELD 1028, WELD 1034, WELD 1036, WELD 2000, WELD 2012, and WELD 2014)

WELD 2018 Blueprint Reading IV, 5 credits
This course is a continuation of Blueprint Reading III. It improves visualization skills and refines the advanced hand and layout skills, essential for fabrication of weldments. Students will use advanced and intricate blueprints fabricated from a variety of base metals. Welding symbols and various welding processes will also be employed. Each project the student receives will be more challenging than the previous project. All blueprints will be introduced by the instructor. (Prerequisites: WELD 1002, WELD 1004, WELD 1006, WELD 1008, WELD 1012, WELD 1014, WELD 1016, WELD 1018, WELD 1022, WELD 1024, WELD 1026, WELD 1028, WELD 1034, WELD 1036, WELD 2000, WELD 2004, WELD 2006 and WELD 2008)

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Anoka Technical College

1355 West Highway 10 Anoka, MN 55303
Phone: 763-576-4700
TTY/TDD users can call the Minnesota Relay
at 711 or 800-627-3529

Directions

From the West

Travel north on Highway 169 to Highway 10 west

Turn north at Thurston Avenue (It is not marked well. It is a controlled intersection). Take an immediate left at the first stop sign. Follow the frontage road north (left). The frontage road leads directly to the parking.

From the East

Travel north on Highway 35E

Go west on Highway 694. Take the Highway 10 exit to Anoka (Remain in the right lane as the road becomes a "Y"). Remain in the right lane for another five minutes, as Highway 10 veers to the right again and ultimately takes a big swing to the west. Turn north at Thurston Avenue (It is not marked well. It is a controlled intersection). Take an immediate left at the first stop sign. Follow the frontage road north (left). The frontage road leads directly to the college parking lot.

From Twin Cities

Travel west on Interstate 94

Take Highway 252 North. Choose East Highway 610. Minnesota Highway 610 intersects with Highway 10. Take Highway 10 West to Anoka. Turn north at Thurston Avenue It is not marked well. It is a controlled intersection). Take an immediate left at the first stop sign. Follow the frontage road north (left). The frontage road leads directly to the college parking lot.

Maps also available online at:
AnokaTech.edu

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