

2008-2009

lake area technical institute

watertown, south dakota



lake area technical institute



230 11th Street Northeast
Watertown, SD 57201
(605) 882-LATI or 1-800-657-4344
www.lakeareatech.edu

2008-2009 catalog

THE COURSES LISTED ARE BELIEVED TO BE ACCURATE AT THE TIME OF PRINTING AND ARE PROVIDED TO FACILITATE ACADEMIC PLANNING. THESE PROVISIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AND DO NOT CONSTITUTE AN OFFER TO CONTRACT WITH ANY PERSON.

Watertown School District 14-4 provides equal opportunity in its employment regulations, educational, and activity programs. It is the policy of the District not to discriminate on the basis of sex, race, color, national origin, creed, religion, marital or veteran status, status in regard to public assistance, age, or disability.

Inquiries regarding implementation and compliance of Americans with Disabilities Act may contact Sandie Jungers, Special Needs Coordinator, Watertown School District 14-4, P.O. Box 730, Watertown, SD 57201-0730, 605-882-6312, and persons with inquiries regarding implementation and compliance regarding Title IX or Section 504 may contact the Watertown School District Superintendent's Office, P.O. Box 730, Watertown, South Dakota 57201-0730, 605-882-6312. Additional inquiries may be directed to the Regional Director, U.S. Department of Education, Office for Civil Rights, 10220 North Executive Hills Boulevard, 8th Floor, Kansas City, MO 64153-1367, (816) 880-4200.



30 North LaSalle Street
Suite 2400
Chicago, Illinois 60602-2504
312-263-0456

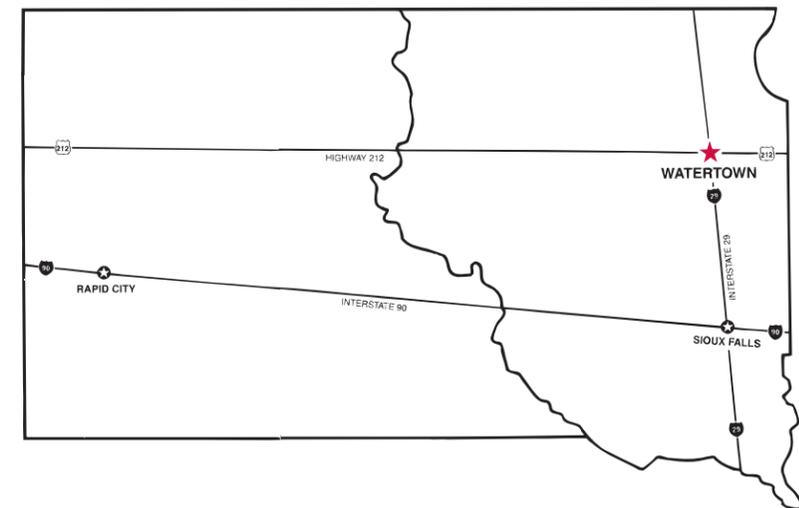
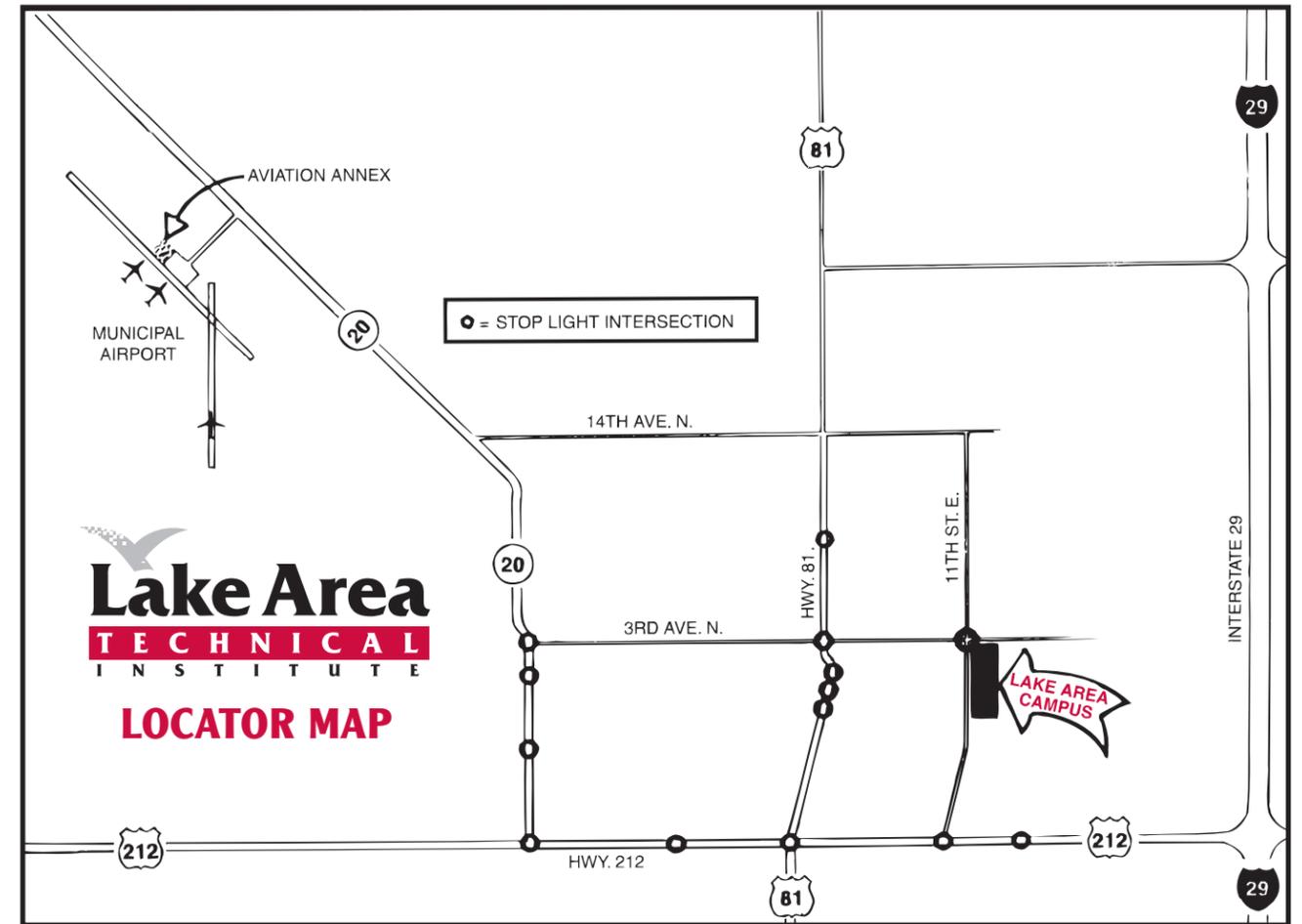
www.ncahigherlearningcommission.org

Accredited by The Higher Learning Commission,
A Commission of the North Central Association of Colleges and Schools.



230 11th Street Northeast
P.O. Box 730
Watertown, South Dakota 57201-0730
(605) 882-LATI or 1-800-657-4344
FAX: 1-605-882-6299
www.lakeareatech.edu

Date of Publication – September 2007



Visitors are always welcome at Lake Area Tech. Office hours are Monday through Friday from 7:30 a.m. to 5:00 p.m. It is recommended that you contact Lake Area Tech prior to your visit to arrange an appointment with admissions personnel.

Visitor parking is located at the far north side of the campus. Enter through the doors facing the parking lot. A short walk down the hall will get you to the Admissions Office.

Lake Area Tech is looking forward to your visit!

table of contents

About Lake Area Tech	2-5	Student Identification Cards	21
2008-2009 Academic Calendar	3	Lake Area Tech Children's Educare Center	21
Value Statements	3	Equity Project	21
Mission Statement	3	Car Pool Information	21
Vision Statement	3	Counseling	22
Admission Policy	3	Housing	22
Admission Procedures	3	Financial Aid	22
Recognized High School Diploma or		School Nurse	22
Equivalency	4	South Dakota Career Center	22
Admission of Transfer Students	4	Special Facilities for Disabled Students	22
Admission of Former Students	4	Placement	22
Admission of International Students	4	Insurance	22
Students With Special Needs	5	Institutional Liability	22
Course Registration	5	Religious Activities	22
Visitors	5	Student's Right to Know &	
New Student Orientation	5	Campus Security Act	22
Applying Over the Internet	5	Programs of Study	23-50
Tuberculosis (TB) Testing		Agriculture - Agri-Business Option	24
for New Students	5	Agriculture - Agri-Production Option	25
Background Checks	5	Agriculture - Dairy Option	26
About Watertown	6-7	Automotive Technology	27
South Dakota's Rising Star	7	Aviation Maintenance Technology	28
Parks	7	Building Trades Technology	29
Recreation	7	Business Accounting Option	30
The Arts	7	Computer Information Systems	31
Shopping	7	Cosmetology	32
Museums	7	Dental Assisting	33
Festivals and Events	7	Diesel Technology	34
Financial Information	8-10	Electronic Systems Technology	35
Tuition and Costs	9	Energy Technology	36
Financial Aid	9	Engineering/Architectural Drafting	37
Scholarship Information	11-15	Environmental Technology	38
Academic Standards	16-18	Financial Services	39
Credit Transfer Information	17	Human Services Technician	40
Student Services	19-22	Machine Tool Technology	41
Career Guidance	20	Marketing/Management/Sales	42
Student Assistance Program	20	Med/Fire Rescue Services	43
Library Facilities	20	Medical Assisting	44
Educational Services Center	20	Medical Laboratory Technician	45
Laptop Lease-To-Own Program	20	1 + 1 Nursing	46
ROTC	20	Occupational Therapy Assistant	47
Student Activities	20	Physical Therapist Assistant	48
Community Activities	20	Robotics	49
Campus Activities Board (CAB)	21	Welding Technology	50
Student Organizations	21	Course Descriptions	51-75
Student Ambassadors	21	Faculty and Administration	76-79
Campus Cash	21	Map	80
Food Service - 11th St. Grille	21		
Student Center	21		
Intramural Sports	21		
Bookstore - 11th St. Book & Supply	21		



about lake area tech



Lake Area Technical Institute operates in full accordance with the State of South Dakota's laws and the regulations of the State Board of Education.

value statements

- We believe in integrity, honesty and a caring attitude.
- We believe all people are valuable and should be treated with respect.
- We believe in promoting a positive image for technical education.
- We believe all employees contribute to the success of the institution.
- We believe that excellence and quality performance promotes success.

mission statement

Lake Area Technical Institute offers superior, comprehensive technical education, creating a foundation for success in an ever-changing world.

vision statement

Lake Area Technical Institute will be the leader in technical education, working in partnership with business and industry and all levels of education. Lake Area Tech staff will integrate the latest technology and methods of delivering quality education to meet emerging global workforce demands. Lake Area Tech will continue to develop marketing strategies to promote technical education and will maintain excellence in all programs.

admission policy

It is the policy of Lake Area Technical Institute that every person be given equal opportunity to be admitted into the program of his or her choice regardless of race, gender, age, national origin, color, creed, religion, marital or veteran status, disability or public assistance reciprocity.

Lake Area Tech normally accepts students for full-time enrollment who are at least 16 years of age and have a high school diploma or GED. Applicants lacking this background must be prepared to demonstrate ability to benefit by passing an approved administered examination. Students admitted on the basis of this examination must pass the requirements for the GED within the first year of classes.

In order to identify the students most capable of program completion and subsequent career success, LATI will require either an ACT test score, TABE test score, or CNET test score for all students desiring admission (some programs require additional testing and an interview). LATI strongly encourages all high school students considering technical education to take the ACT test when it is offered in their area. If that is not possible, applicants will need to schedule the TABE or CNET test at Lake Area Tech. Acceptance will be based on test scores.

admission procedures

Lake Area Technical Institute requires all interested students to:

1. Complete an application form. Lake Area Tech requires a \$20.00 non-refundable application fee which is to be submitted at the time of application for admission.

If a student has been registered previously at Lake Area Tech, the \$20.00 application fee will be required to update his/her admission file.

2. Submit a transcript of high school record or GED certificate. If an applicant has attended other post-secondary schools or colleges, transcripts of this work should also be sent. High school seniors may apply any time during their senior year, but applications from juniors will not be processed.
3. All applicants need to submit ACT scores or schedule an appointment at LATI to take an entrance test. These test scores, along with the transcripts, will assist the admission officer in determining if the applicant has the necessary ability to succeed in their program of choice. Some LATI programs require additional testing and an interview.
4. Upon acceptance to Lake Area Tech, a \$150.00 deposit will be requested of which \$25.00 is non-refundable. The remainder will be applied to tuition and fees.

Early applications are recommended for students who want to be certain of being admitted to the program of their choice. All applications for admission should be sent to the Admissions Office.

2008-2009 academic calendar*

New Student Orientation	August 18
Fall Semester Begins	August 19
Labor Day	September 1
ATEA Conference	October 10
Veterans' Day	November 11
Thanksgiving Break	November 27-30
Fall Semester Ends	December 19
Winter Break	December 20-January 4
New Student Orientation	January 5
Spring Semester Begins	January 6
Teacher Inservice (no classes)	February 13
Presidents' Day	February 16
Spring Break	March 9-13
Easter Break	April 10-13
Spring Semester Ends	May 15
Summer Session Begins	May 19
Memorial Day	May 25
General Education Classes Begin	May 26
Independence Day Observed	July 3
Summer Session Ends	July 17

* Academic calendar subject to change.



recognized high school diploma or equivalency

High school diplomas obtained through an online high school program will be accepted by Lake Area Technical Institute if the institution granting the diploma is accredited by the North Central Association of Colleges and Schools or a State Board of Education.

Home school graduates will be recognized as high school graduates. Some Lake Area Tech programs have national licensure requirements that may affect the admission process. Please contact Lake Area Tech for further information.

Acceptable TABE (Test of Adult Basic Education) scores or ACT (American College Testing) scores will be required for admission from online high school graduates, home school graduates, high school graduates or GED certificate holders.

Please contact the Admissions office for further information or if you have specific questions.

admission of transfer students

A decision concerning the acceptance of transfer students will not be made until an official transcript has been received by the Admissions Office from the institution the student previously attended.

Credits earned at other recognized accredited colleges, universities, and technical schools may be accepted in transfer; however, only those that apply to the student's major at Lake Area Tech are recorded on the transcript.

admission of former students

Any former student who was in good standing will be re-admitted if a suitable class schedule can be arranged for the applicant. All other applicants will be reviewed on a case by case basis.

admission of international students

To be considered for admission to Lake Area Technical Institute, international students must:

1. Rank in the upper half of their secondary school graduation class.
2. Have a 3.0 (B) average if transferring from another technical school, college or university.
3. Be proficient in English.
4. Be financially self-sustaining.

Your application will be processed when we receive ALL of the following documents and information. Please use the following as a checklist:

1. Complete and return an application form. Files for international students must be complete by May 1 for Fall Semester and September 1 for Spring Semester.
2. Submit the \$250.00 international application fee.
3. Academic credentials (translated into English).
4. TOEFL score (minimum paper-based score of 500, computer-based score of 200; score cannot be more than two years old). The results must be sent to Lake Area Technical Institute, Attention: Registrar, P.O. Box 730, 230 11th Street NE, Watertown, SD 57201-0730.
5. Financial certification form.
6. Letter from financial sponsor (if applicable).
7. Bank/Employer/Broker financial statement.

An I-20 cannot be issued to you until your file is complete and you are admitted to Lake Area Technical Institute. The form I-20 is usually necessary for admission into the United States for post-secondary attendance. The American Consulate in your country can supply detailed information on student status and required visas.



students with special needs

Lake Area Technical Institute strives to assist our students with special needs.

LATI complies fully with the Americans with Disabilities Act (ADA).

Please contact Jeanie True, Special Needs/Educational Services Center Coordinator, Ext. 216 or Lee Quale, Director of Enrollment, Ext. 228 if you wish to discuss special needs.

course registration

All new students will be registered by the Director of Enrollment's Office. College and high school transfer work is evaluated by the Director of Enrollment for possible transfer credit. Copies of the registration and class schedules are mailed to the new students. Continuing students will complete their registration with the help of their advisor.

visitors

Visitors and prospective students are always welcome at Lake Area Technical Institute. School offices are open Monday through Friday from 7:30 a.m. to 5:00 p.m. Visitors are urged to allow at least one hour for touring and visiting with school personnel. Since the majority of classes are completed by 3:00 p.m., visitors are asked to arrive prior to that time so they can see labs and classrooms while they are in operation. Those desiring to visit the school should contact:

Admissions Office, Lake Area Technical Institute
P.O. Box 730, 230 11th Street NE
Watertown, SD 57201-0730
(605) 882-LATI or 1-800-657-4344

new student orientation

In order to become familiar with Lake Area Tech's student services and campus, a new student session is scheduled for all incoming students on the first day of school. During this day, student services are explained and student services personnel introduced.



applying over the internet

Lake Area Tech offers online application and complete campus information over the Internet (www.lakeareatech.edu). Students may choose to use a credit card to pay the \$20.00 application fee or mail the payment when applying online. If an application is received online, LATI will not process it until the \$20.00 application fee is paid and all transcripts have been submitted.

tuberculosis (TB) testing for new students

Because of the increase in documented cases of tuberculosis in the United States, health professionals are suggesting that people be tested for TB on a yearly basis. LATI has instituted the following policy in reaction to this information:

1. All students enrolled in a health occupation program (Human Service Technician, Medical Assisting, Dental Assisting, Occupational Therapy Assistant, Physical Therapist Assistant, Medical Lab Technician, Nursing, Med/Fire Rescue) at LATI MUST be tested for tuberculosis (TB).
2. This test will be administered by nursing students for a small fee after school begins in the fall.
3. If the student prefers to have the test done by his/her physician, documentation of the results of the test must be submitted to LATI.
4. All other full-time and part-time students and employees of LATI are invited and encouraged to participate in the tuberculosis testing program.

background checks

Criminal background checks are performed on most health program students before clinical rotations begin. The check is performed at the student's expense.



about
watertown





south dakota's rising star

Watertown, South Dakota, is a city of 20,000 and is located on the Big Sioux River and bordered by Lake Kampeska and Lake Pelican.

Here you'll discover the magic of nature. Each of the four seasons is celebrated with vibrant, natural color changes. Lifestyles and activities change with the colors. Cool off with a swim in the lake on a summer afternoon, hunt game in the crisp air of fall with the leaves crunching beneath your shoes, cross-country ski in the fresh snows of winter and witness earth's awakening to the sights and sounds of the spring thaw.

Watertown is a recreational playground. The tremendous variety of outdoor recreational opportunities not only makes Watertown a nice place to visit, but also a great place to call home!

parks

BRAMBLE PARK AND ZOO – Offers over 500 animals, Discovery Center, gift shop and walkthrough bird encounter. Picnic area, park, playground and band concerts.

MEMORIAL PARK – Located on Lake Kampeska. Swimming, boat launch, camping and concessions.

STOKES-THOMAS LAKE CITY PARK – Located on Lake Kampeska. Modern comfort camping, swimming and boat launching.

LAKE PELICAN RECREATION AREA – Located on Lake Pelican. Fishing, camping, swimming, boating. Warming house available for ice fishing, snowmobiling and cross-country skiing.

SANDY SHORES STATE PARK – Located on Lake Kampeska. All water sports. Boat launch, picnic area and camping.

recreation

WATERTOWN COMMUNITY RECREATION CENTER – Modern complex offers Olympic-sized swimming pool, saunas, whirlpool, handball/racquetball courts, weight rooms, Nautilus equipment, indoor track and gymnasium.

BASEBALL/SOFTBALL

BICYCLING AND JOGGING – 18.8 miles of paved trail. Also, fitness trail featuring 20 fitness stations.

BOATING/FISHING

BOWLING

MINIATURE GOLF/GO-KART RACING

GOLF – One 18-hole golf course and one 27-hole golf course

HUNTING

ICE SKATING – Indoor ice arena and outdoor ice rink with warming house.

SKATE PARK

STOCK CAR RACING – 1/4 mile track.

SWIMMING – Indoor and outdoor pools, water park and public beaches.

TENNIS COURTS

MOVIE THEATRE – Five-plex

the arts

Dakota Belles Barbershop Chorus

Town Players Community Theatre

Watertown Art Festival

Glacial Lakes Harmonizers

Municipal Band

Redlin Art Center

Art Walk

shopping

Uptown Watertown

Watertown Mall

Magic Mile - Highway 212

museums

Codington County Heritage Museum

Mellette House

Redlin Art Center

festivals and events

Watertown Winter Farm Show – winter

Crazy Days – summer and winter

4th of July Celebration

Kampeska Wing Fling

Terry Redlin Concert





financial information



tuition and costs

TUITION

The tuition rate is \$74.00 per semester credit.

FEES

The facility fee rate is set by the State of South Dakota. The fee charged will be \$10.50 per credit for all students.

LATI also charges departmental fees and a campus support fee. See a current cost sheet for these charges.

ONLINE FEES

Students enrolled in classes that are offered online will be charged the established tuition and fees, based upon the number of credits taken. In addition, a \$30 per credit fee is included.

BOOKS, SUPPLIES AND TOOLS

Students are required to purchase designated books and supplies as assigned by instructors in each course. Some programs require tools and uniforms that are characteristic of the occupation for which students are being trained. The majority of materials can be purchased directly from the Bookstore.

HOUSING

To assist students who are seeking housing accommodations, the school maintains a list of available housing which also contains such information as type of accommodations, size and cost. This list is also available on the Lake Area Tech website. Students are encouraged to seek housing well in advance of the opening date of school.

MEALS

The school cafeterias, which are located in the Student Center and the Manufacturing Education Center, serve meals daily from 6:45 a.m. to 4:00 p.m. No evening meals are available. Students pay for their meals at the time of purchase. No meal plans are required, however, campus cash is accepted.



APPLYING FOR FINANCIAL AID

As soon as the student (and your parents if dependent) have completed your tax return(s) for the most recent year, a Free Application for Federal Student Aid (FAFSA) should be completed. The FAFSA may be obtained from any high school counselor or the LATI Financial Aid Office. You may also apply for financial aid online at fafsa.ed.gov.

The FAFSA will determine eligibility for the Pell Grant, Supplemental Educational Opportunity Grant, Academic Competitiveness Grant, Work Study, Perkins Loan, Stafford Loan and other need-based financial aid.

Steps to Follow:

1. Complete the FAFSA on or after January 1.
2. Approximately three weeks after mailing the FAFSA or about 10 days after submitting it electronically, the Central Processing System (CPS) will send the student a Student Aid Report (SAR).
3. Keep the SAR for your records. You do not need to send it to Lake Area Tech. LATI automatically receives this information if you list us on your FAFSA.
4. You will then be sent an award letter indicating the amount and types of financial assistance you can expect to receive. (BE SURE TO SIGN AND RETURN ONE COPY.)

The Financial Aid Office at Lake Area Technical Institute has the capability to process corrections to FAFSA data electronically.

PRIORITY DATE!

Since funds under the Perkins, Work Study and SEOG programs are limited, it will be necessary to make application prior to April 15 by using the FAFSA. Any FAFSA submitted after April 15 cannot expect to be awarded aid on the basis of demonstrated financial need. However, this does not affect eligibility for a Pell Grant or the Stafford Loan.

FINANCIAL AID RESOURCES

Federal Pell Grant: A federal grant program that provides funds to students who demonstrate financial need.

Federal Supplemental Educational Opportunity Grant (SEOG): A federal program that provides funds to students with exceptional financial need.

Academic Competitiveness Grant (ACG): A grant awarded to students that have completed a rigorous high school curriculum and are eligible for a Pell Grant.

Federal Work Study: A federal program for students who demonstrate financial need. Students may work part-time on or off campus at approved work sites and are given the opportunity to earn money and gain work experience.

Federal Perkins Loan: A campus-based loan that is federally funded with eligibility determined by the Financial Aid Office. You must have exceptional need to qualify for this loan. Repayment begins nine months after you graduate or drop below half time.

Federal Stafford Loan: A low interest loan that allows dependent students to borrow up to \$3,500 for their first year and \$4,500 for their second year. This loan is either subsidized or unsubsidized. If the loan is subsidized, the interest rate does not accrue until six months after you graduate or drop below half time. If the loan is unsubsidized, interest is charged from the time the loan is disbursed. Independent students may be eligible for an additional \$4,000 a year in unsubsidized Stafford loans.

Federal Parent Loan (PLUS): A loan program which provides an opportunity for parents of dependent students to borrow funds for their student's educational costs. The Financial Aid Office certifies the eligibility, but the money is borrowed from a bank, credit union, or other participating lender. Loan amounts may not exceed educational costs minus other financial aid.

To apply for the PLUS loan, contact the Financial Aid Office.

Alternative Loans: Many lenders offer loans through their own private loan programs. Information on alternative loan programs is available by contacting the Financial Aid Office.

OTHER OFF-CAMPUS AGENCY AND FINANCIAL AID SOURCES

Bureau of Indian Affairs (BIA): If you qualify for BIA funds, you should start by contacting your local BIA Agency. Paperwork completed early will ensure timely arrival of your funding.

Vocational Rehabilitation: Financial assistance is available for mentally or physically disabled persons. Contact your local vocational rehabilitation office.

Veterans: Students enrolled at Lake Area Tech are eligible to apply for veterans' benefits. To apply for benefits, contact a Veterans' Service Officer or the Financial Aid Office at Lake Area Tech.

National Guard Benefits: Members of the National Guard may qualify for 50% tuition assistance and monthly stipends under the Chapter 1606 or 1607 program. Contact your commanding officer for more information.

Workforce Investment Act (WIA): This is a program funded by the South Dakota Department of Labor. Economically disadvantaged students may qualify for grants in certain educational programs. Contact the South Dakota Career Center in your area.

STUDENT CONSUMER INFORMATION

The following information is available at the Financial Aid Office or Admissions Office to any student wishing to apply for financial assistance at Lake Area Tech:

- The methods by which such assistance is distributed among student recipients who enroll at Lake Area Tech.
- Any means, including forms, by which application for student financial assistance is made and requirements for accurately preparing such application.
- The rights and responsibilities of students who receive financial assistance.



- The cost of attending Lake Area Tech.
- The tuition refund policy.
- Persons to contact who are designated by the institution to assist students in obtaining financial aid information.
- Special facilities and services available to handicapped students.
- Names of associations, agencies, or government bodies which accredit, approve, or license the school and its programs.
- The document describing the school's accreditation, approval or licensing.
- The standards which the student must maintain in order to be considered to be making satisfactory progress.
- Lake Area Tech's completion and job placement rates.
- The method and dates of financial aid disbursement.
- The terms and conditions of employment for students awarded Federal Work Study.
- The terms of and schedules for repayment of student loans and deferral of loan payment for volunteer service.
- Information regarding drug and alcohol abuse prevention.
- Graduation or completion rates for programs.

REFUND POLICY

Refunds of tuitions/fees will be made in accordance of the U.S. Department of Education Return of Title IV Funds. Further information and examples of the refund policy are available by contacting the Financial Aid Office at LATI.

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)

Legislation enacted in 1974 sets forth requirements designed to protect the privacy of students' educational records.

Questions regarding FERPA may be directed to the Director of Enrollment.



scholarship information



lake area tech foundation

The Lake Area Tech Foundation awarded over \$135,000 in scholarship support during the 2006-2007 school year. Funding for these scholarships is made possible by donations provided from individuals, businesses, corporations and by LATI staff, faculty and alumni. Recipients must be enrolled in 12 credit hours per semester and maintain the satisfactory progress requirements as stated in the catalog. Scholarship amounts are subject to change without notification.

To receive an application form for all Foundation scholarships, contact LATI Foundation, P.O. Box 730, Watertown, SD 57201 or call 1-800-657-4344, Ext. 292. Applications may be completed and printed from www.lakeareatech.edu at the Alumni/Foundation pull down menu and the "apply for scholarships" tab. Application deadline is April 15, 2008 for Fall 2008 enrollment.

Students who meet the criteria for a Merit Scholarship listed below will automatically receive the indicated award in addition to any other scholarships earned by completing the application.

Criteria	GPA*	Amount
ACT 28+	Minimum 3.0	\$1,000
ACT 26 & 27	Minimum 3.0	\$750
ACT 24 & 25	Minimum 3.0	\$500

*High school or post secondary transcripts qualify.

foundation scholarships

3M Aberdeen/Brookings Scholarships – One \$1,000 scholarship awarded to an incoming Electronic Systems Technology student, one \$1,000 scholarship awarded to an incoming Robotics student and one \$1,000 scholarship awarded to an incoming Machine Tool Technology student.

Aason Engineering Company, Inc. Scholarship – One \$500 scholarship awarded to an incoming Engineering/Architectural Drafting student.

Ag Department Class Scholarship – Currently no scholarship is awarded from this fund while the account builds.

Al and Irene Kurtenbach Scholarship – One \$500 scholarship awarded to an Electronic Systems Technology student.

Aviation Class Scholarship – Currently no scholarship is awarded from this fund while the account builds.

Barkley Truck Lines Scholarship – \$500 scholarship(s) are awarded to incoming students (number of awards vary).

Best Business Products Scholarship – One \$500 scholarship awarded to an incoming Electronic Systems Technology or Business Division student.

Boulder Memorial Open Scholarship – Scholarship(s) to be awarded to an incoming or second-year student (number of awards vary).

Brian's Glass & Door, Inc. Scholarship – One \$500 scholarship awarded to an Aviation Maintenance Technology student.

Brown Clinic Scholarships – One \$500 scholarship awarded to an incoming student and one \$500 scholarship awarded to a second-year student enrolled in MA, MLT, OTA, PN, or PTA (certain conditions apply).

Carrie Weier Memorial Scholarship – Currently no scholarship is awarded from this fund while the account builds.

Chad Peterson Memorial Scholarship – One \$500 scholarship awarded to an incoming Welding Technology student with preference to the Florence, SD area.

Christine Berger Scholarship – One \$500 scholarship awarded to an Electronic Systems Technology or Robotics student.

Citibank Scholarship – One \$500 scholarship awarded to an incoming student.

Clint DeGeest Memorial Scholarship – One \$1,000 scholarship awarded to an incoming student (certain conditions apply).

Computer Information Systems Class Scholarship – Currently no scholarship is awarded from this fund while the account builds.

Cosmetology Class Scholarship – Currently no scholarship is awarded from this fund while the account builds.

County Fair Food Store Scholarship – Up to a \$750 scholarship awarded to an employee or relative of an employee of County Fair Food Store, Watertown.

Cowboy Country Stores Scholarship – One \$500 scholarship awarded to an incoming student.

Crawford Funeral Chapel Scholarship – One \$500 scholarship awarded to an incoming student (certain conditions apply).

CTE Scholar Award Scholarships – \$150 scholarships awarded to incoming students who have a GPA of 3.5 and have a minimum of two Multi-District credits.

Custom Fabricators, Inc. Scholarship – \$500 scholarship(s) awarded to incoming or second-year students (number of awards vary).

D.L. Fie Family Scholarship – One \$500 scholarship awarded to an incoming Machine Tool Technology student.

Dacotah Bank of Watertown Scholarships – Four \$500 scholarships awarded to incoming and second-year Financial Services students.

Dakota Sioux Casino and Hotel Scholarship – Scholarships awarded to an incoming or second-year student (amount and number of awards vary).

Dakota Tube, Inc. Scholarship – One \$500 scholarship awarded to an incoming Welding Technology student.

Dale and Diane Christensen Scholarship – One \$500 scholarship awarded to an incoming Financial Services student.

Dallas I. Hanson Construction Scholarships – Two \$500 scholarships awarded to incoming Building Trades Technology or Engineering/Architectural Drafting students.

Dental Assisting Class Scholarship – Currently no scholarship is awarded from this fund while the account builds.

Dorothy Schooley Scholarship – One \$500 scholarship awarded to an incoming Practical Nursing student.

Dr. Hollis and Marilyn Nipe Scholarship – \$500 scholarship(s) awarded to a student in the health division (number of awards vary).

Dr. Robert Bartron Memorial Scholarship – One \$500 scholarship awarded to an incoming male student in the MA, MLT, OTA, PN or PTA programs.

East River Electric Scholarship – One \$750 scholarship awarded to an incoming Electronic Systems Technology student (certain conditions apply).

Elks Lodge #838 of Watertown Scholarship – One \$500 scholarship awarded to an incoming student (certain conditions apply).

Elva Sigurdson Scholarship – One \$250 scholarship awarded to an incoming Medical Assisting student.

Engineering/Architectural Drafting Class Scholarship – Currently no scholarship is awarded from this fund while the account builds.

ESCO/Stein Sign Display Scholarship – One \$250 scholarship awarded to an incoming Welding Technology student.

Experimental Aircraft Association Scholarship – One \$200 scholarship awarded to a second-year Aviation Maintenance Technology student.

First PREMIER Bank Scholarships – \$500 and \$1,000 scholarships awarded annually (certain conditions apply and number of awards vary).

Francis and Dee Kick Scholarship – \$500 scholarship(s) awarded to incoming students.

Fryslie Family Memorial Scholarship – One \$250 scholarship awarded to an incoming student with preference given to a Watertown area student.

Graco, Inc. Scholarships – Five \$2,000 scholarships awarded annually (certain conditions apply).

Great Western Bank Scholarships – Four \$500 scholarships are awarded to incoming Financial Services or Marketing/Management/Sales students.

Herb Jenson Memorial Scholarship – One \$750 scholarship awarded to an incoming student.

Honors Agriculture Division Scholarship – \$500 scholarship(s) available to an incoming Agri-Business or Agri-Production student (number of awards vary).

Honors Business Division Scholarship – \$500 scholarship(s) available to incoming Financial Services, Computer Information Systems or Marketing/Management/Sales students (number of awards vary).

Honors Health Division Scholarships – \$500 scholarship(s) available to incoming Cosmetology, Dental Assisting, Environmental Technology, Human Services Technician, Med/Fire Rescue Services, Medical Assisting, Medical Laboratory Technician, Occupational Therapy Assistant, Physical Therapist Assistant or Practical Nursing students (number of awards vary).

Honors Technical Division Scholarships – \$500 scholarship(s) available to Machine Tool Technology, Electronic Systems Technology, Automotive Technology, Diesel

Technology, Aviation Maintenance Technology, Energy Technology, Engineering/Architectural Drafting, Robotics, Welding Technology or Building Trades Technology students (number of awards vary).

Horton, Inc. Scholarships – Four \$1,000 scholarships awarded to incoming Machine Tool Technology students. Consideration will be given to second-year students.

Human Service Agency Foundation Scholarship – One \$500 scholarship awarded to an incoming Human Services Technician student emphasizing in mental or developmental disabilities.

Huron Clinic Scholarships – Two \$500 scholarships awarded to incoming Medical Assisting students with preference to Huron area students.

Hy-Vee Food Store of Watertown Scholarship – One \$500 scholarship awarded to an incoming student.

Independent Community Bankers Scholarship – One \$500 scholarship awarded to a second-year Financial Services student.

James Tellinghuisen Memorial Scholarship – One \$250 scholarship awarded to an incoming Machine Tool Technology student.

James Von Eye Memorial Scholarship – One \$250 scholarship awarded to an incoming Building Trades Technology student.

Jim and Ardys Berven Scholarship – One \$500 scholarship awarded to an incoming student.

Jim and Janice Sharp Family Scholarship – One \$500 scholarship awarded to an incoming Automotive Technology student.

Jon Nash Memorial Scholarship – One \$500 scholarship awarded to an incoming Electronic Systems Technology student.

Joy Nelson Scholarships – Two \$500 scholarships awarded to incoming or second-year Building Trades Technology students.

Kampeska Chapter of the Izaak Walton League Scholarship – One \$500 scholarship awarded to an incoming Environmental Technology student.

LATI Alumni Association Scholarship – One \$500 scholarship awarded to a student who is a child of a LATI alumni.

LATI Alumni Staff Scholarship – One \$500 scholarship awarded to a student who is a relative of a current LATI staff/faculty member.

Leonard and Ardell Timmerman Scholarship – One \$500 scholarship awarded to an incoming student.

Lester E. Schull Memorial Scholarship – One \$500 scholarship awarded to an incoming Building Trades Technology student.

Lindsey Venjohn Memorial Scholarship – One \$250 scholarship awarded to an incoming Marketing/Management/Sales student.

Magic Mile Lions Club Scholarship – One \$500 scholarship awarded to an incoming Watertown High School graduate.

Maxine and Jim Endres Scholarship – \$500 scholarship(s) awarded to an incoming student (number of awards vary).

Mayor's Community for People with Disabilities – One \$500 scholarship awarded to an incoming student (certain conditions apply).

Multi-District/LATI Alliance Scholarship – One scholarship of tuition and fees for a Lake Area Multi-District student who transitions to Lake Area Technical Institute in a related program of study.

Nick Mortenson Memorial Scholarship – One \$250 scholarship awarded to an incoming Automotive Technology student to be used to purchase tools.

Occupational Therapy Assistant Class Scholarship – Currently no scholarship is awarded from this fund while the account builds.

Office Systems, Inc. Scholarship – One \$500 scholarship awarded to an incoming student.

OtterTail Power Company Scholarships – \$1,000 renewable scholarships awarded annually to Electronic Systems Technology, Machine Tool Technology, Robotics and Welding Technology students (number of awards vary).

Peggy Haugan Scholarship – One \$500 scholarship awarded to an incoming or second-year Building Trades Technology student.

Pepsi-Cola Scholarship – One \$500 scholarship awarded to an incoming student.

Peterson Motors Scholarship – One \$500 scholarship awarded to an incoming Diesel Technology student.

Plains Commerce Bank Scholarships – Two \$500 scholarships awarded to incoming students.

Prairie Appreciation Scholarship – One \$500 scholarship awarded to an incoming Marketing/Management/Sales student. (Preference given to a female who is dedicated to her career and has a 3.0 grade point average.)

Prairie Lakes Healthcare System Scholarship – Six \$1,000 scholarships awarded to students enrolled in MA, MLT, OTA, PN or PTA programs (certain conditions apply).

PREMIER Bankcard Scholarships – \$1,000 scholarships awarded annually (certain conditions apply and number of awards vary).

President's Honor Award – \$1,000 scholarship awarded to the Merit Scholarship recipient with the highest ACT score. This scholarship is in honor of LATI's past President Gary Williams.

Professional Mailing and Marketing Scholarship – One \$500 scholarship awarded to an incoming or second-year student.

Pro-Tec Roofing Scholarship – One \$500 scholarship awarded to an incoming Building Trades Technology student.

Ray and Lois DeWall Family Scholarship – One \$500 scholarship awarded to an incoming student.

Raymond Sturm Memorial Scholarship – One \$500 scholarship awarded to an incoming Welding Technology student.

Reliabank Scholarship – One \$500 scholarship awarded to an incoming student (certain conditions apply - must be a bank customer.)

Robert A. Hayes Memorial Scholarship – One \$250 scholarship awarded to an incoming Automotive Technology student.

Smith Equipment Scholarships – One \$750 scholarship awarded to an incoming Welding Technology student and one \$750 scholarship awarded to an incoming Machine Tool Technology student.

South Dakota Automobile Association Scholarships – One \$1,000 scholarship awarded to an incoming student, one \$1,000 scholarship awarded to a returning second-year student and three \$1,000 scholarships awarded to outgoing graduates in the Automotive Technology program.

South Dakota Bankers Foundation Scholarship – One \$1,000 scholarship awarded to a second-year Financial Services student.

South Dakota Dental Foundation Scholarships – Four \$250 scholarships awarded to incoming or returning Dental Assisting students.

The Family of Greg Voight Scholarship – One \$500 scholarship awarded to an Aviation Maintenance Technology student.

The Watertown Community Foundation Women and Giving Scholarship – One \$500 scholarship awarded to a female applicant.

Twin City Die Casting Company in Memory of Steven James Harman Scholarship – One \$500 scholarship awarded to an incoming Machine Tool Technology student.

Ultra Inc. Scholarship – One \$500 scholarship awarded, with preference to an incoming Computer Information Systems student.

Vern and Audrey Luken Family Scholarship – One \$500 scholarship awarded to an incoming student with preference given to an applicant who has lost one or both parents.

Vic and Lois Wilkey Scholarship – One \$500 scholarship awarded to an incoming Electronic Systems Technology student.

Watertown Area Dentists' Scholarship – One \$250 scholarship awarded to an incoming Dental Assisting student.

Watertown Area Homebuilders Association Scholarship – One \$500 scholarship awarded to a second-year Building Trades Technology student with preference to a student who will remain in the Watertown area upon graduation.

additional foundation scholarships

The following scholarships require a separate application to be completed other than the general Foundation application. Contact the Lake Area Technical Foundation office for information and applications.

GENERAL

Don Lindahl Outstanding Student Scholarship – One \$500 scholarship awarded to a graduating student showing excellence in their program. Students may apply following nomination by their instructor. Deadline is February 1.

Vintiques Car Club Scholarship – One \$500 scholarship awarded to a student. Deadline is April 15.

AUTOMOTIVE TECHNOLOGY

Paul Young Memorial Scholarship – One \$250 scholarship awarded to a second-year Automotive Technology student. Deadline is November 30.

AVIATION MAINTENANCE TECHNOLOGY

SD PAMA Scholarships – Two \$250 scholarships awarded to first year Aviation Maintenance Technology students. Deadline is November 30.

SD Pilots Association Scholarship – One \$500 scholarship awarded to a second-year Aviation Maintenance Technology student.

BUILDING TRADES TECHNOLOGY

Watertown Area Building Suppliers Scholarship – One \$500 scholarship awarded to a second-year Building Trades Technology student. Deadline is November 30.

COMPUTER INFORMATION SYSTEMS

Delores (Dee) Feuerstein Memorial Scholarship – One \$250 scholarship awarded to a second-year Computer Information Systems, Financial Services or Marketing/Management/Sales student (preference given to a female applicant). Deadline is November 30.

DENTAL ASSISTING

Masonic Temple Concord Lodge #13 in Honor of Dr. Edward Harper, DDS Scholarship – One \$750 scholarship awarded to a graduating Dental Assisting student. Deadline is November 30.

Southeast District Dental Society Benevolent Scholarships – Five \$500 scholarships awarded to Dental Assisting students. Deadline is November 30.

DIESEL TECHNOLOGY

Butler CAT Scholarships – Five \$500 scholarships awarded to second-year Diesel Technology students. Deadline is November 30.

Dennis Tesch Memorial Scholarship – One \$500 scholarship awarded to a second-year Diesel Technology student. Deadline is November 30.

Diesel Instructors Scholarships – Awarded to Diesel Technology students by instructor recommendation (amount and number of awards vary).

James Valley Two-Cylinder Club Scholarship – One \$250 scholarship awarded to a first-year Diesel Technology student. Deadline is November 30.

John Dagele Scholarship – One \$250 scholarship awarded to a second-year Diesel Technology student. Deadline is November 30.

FINANCIAL SERVICES

Delores (Dee) Feuerstein Memorial Scholarship – One \$250 scholarship awarded to a second-year Computer Information Systems, Financial Services or Marketing/Management/Sales student (preference given to a female applicant).

Rick Arbach Memorial Scholarship – One \$300 scholarship awarded to a second-year Financial Services student. Deadline is November 30.

MACHINE TOOL TECHNOLOGY

Jack and Maisie Barrick Memorial Scholarship – One \$1,000 scholarship awarded to a second-year Machine Tool Technology student.

MARKETING/MANAGEMENT/SALES

Delores (Dee) Feuerstein Memorial Scholarship – One \$250 scholarship awarded to a second-year Computer Information Systems, Financial Services or Marketing/Management/Sales student (preference given to a female applicant). Deadline is November 30.

Excellence in Marketing Scholarships – Awarded to graduating Marketing/Management/Sales students by instructor recommendation (number of awards vary).

SHRM Chapter of Watertown Scholarship – One \$500 scholarship awarded to a second-year student in the Marketing/Management/Sales program. Deadline is November 30.

MEDICAL LABORATORY TECHNICIAN

Dawn Nelson Memorial Scholarship – One \$500 scholarship awarded to a second-year Medical Laboratory Technician student. Deadline is April 15.

PHYSICAL THERAPIST ASSISTANT

Physical Therapist Assistant Scholarship – One \$250 scholarship awarded to a second-year Physical Therapist Assistant student. Deadline is November 30.

PRACTICAL NURSING

Mary M. Tesch Memorial Scholarship – One \$500 scholarship awarded to a Practical Nursing student. Deadline is November 30.

Solberg Family in Memory of Darlene (Wells) Solberg Scholarship – One \$500 scholarship awarded to a Practical Nursing student. Deadline November 30.

Suzanne Jacobson Memorial Scholarships – Two \$500 scholarships awarded to Practical Nursing students. Deadline November 30.

WELDING TECHNOLOGY

Outstanding Welding Student Scholarship – One \$250 scholarship awarded to a Welding Technology student. Deadline is November 30.

foundation achievement scholarships

Twenty \$500 Achievement Scholarships will be awarded during the 2008-2009 school year to students in two-year programs. Five \$500 Achievement Scholarships will be awarded to students in one-year programs. Application deadline is November 30.



academic standards



ACCREDITATION

Lake Area Technical Institute is accredited by The Higher Learning Commission, A Commission of the North Central Association of Colleges and Schools, the South Dakota Division of Workforce and Career Preparation and by numerous agencies governing the quality and accreditation of the many programs at Lake Area Tech.

INSTRUCTORS

All instructors have many years of successful practical experience in the job areas they teach, as well as having professional education and academic training. All instructors are certified by the South Dakota Office of Career and Technical Education.

SATISFACTORY PROGRESS

Students are expected to meet standards of progress as determined by general school policy and department policy. Each department sets its minimum standards based on industry requirements.

ATTENDANCE

All departments have attendance requirements. Attendance is important to both the mastery of course skills and development of proper work habits.

PLACEMENT AND PRIOR LEARNING

Advanced Placement (AP) is available in Keyboarding classes. The programs which instruct keyboarding will do a placement test with students and register the student for the most appropriate course for the skill level demonstrated. The student will be granted credit for any keyboarding course he/she tests out of at no charge.

Prior Learning (PL) is granted in cases where a student may have work experience or other experiences where technical credit may be granted. This decision is made by the program department head. Verification may be requested.

transfer credit from high school

Tech Prep credit may be granted to students who graduated from high schools that have articulation agreements with LATI. This option and the conditions that apply are explained in the registration information that each student receives prior to attending LATI.

COMPUTER

LATI will transfer up to two credits in computers for students who have taken high school computer classes and graduated from high school within the last three years under the following conditions:

- The student must have completed one credit of computers (excluding keyboarding).
- The student must have a grade of B or better in these classes.

ACCOUNTING

Students who have completed one credit of high school accounting or bookkeeping within the last three years and received a grade of "B" or better will be allowed to articulate two credits towards an accounting course at Lake Area Technical Institute. Students also have the option to test out of ACCT 210 Principles of Accounting I.



AGRICULTURE

If your high school uses the Statewide Agriculture Profile Curriculum and you enroll in the Lake Area Agri-Business or Agri-Production program, up to 15 credits may be articulated. Contact the Lake Area Tech Agriculture Department Supervisor, Jim Clendenin, for more details.

test outs available for these courses:

ACCT 210 Principles of Accounting I Students may request to test out of ACCT 210 Principles of Accounting I. The test consists of an accounting simulation and takes approximately five hours (this may be completed over several days.)

The fee for the test out is \$10.00 per credit. A minimum score of 80% is needed to pass. Should the test out be successful, the student does not pay for ACCT 210 and their transcript will reflect the credit earned.

Computers Students may request to test out of the following computer courses: CSC 100 Introduction to Computers, CIS 105 Microcomputer Software Applications, CIS 125 Advanced Microcomputer Applications, CIS 102 Windows Applications for Technicians. A fee of \$10 per credit is required for the test.

Math Students may request to test out of any general math course. The test must be done during the first week of the semester. A fee of \$30.00 is required for the test.

Keyboarding All students who are required to take keyboarding may receive up to the five Prior Learning credits based on a keyboarding placement test.

transfer of previously earned college credits to lake area tech

Any credits transferred to Lake Area Tech must meet the following criteria:

1. An official transcript must be submitted from an accredited post-secondary institution. This will be kept in the student's official file at Lake Area Tech.

2. Credits must have a grade of "C" or above to be considered for transfer. When a course has been repeated for credit, the last grade earned will be evaluated for transfer.
3. Transfer credits will be recorded on the Lake Area Tech transcript with a TR notation. Transferred credits are not calculated in Lake Area's grade point average.
4. There is no charge to transfer credits for presently-enrolled students.
5. Transfer credits are not eligible for financial aid.
6. The minimum unit to be transferred is one-half credit. Courses accepted in transfer from institutions with different credit and/or grading systems than Lake Area Tech's will be converted.

transfer of general education college credits

In addition to the preceding criteria, the following policies apply:

1. No age restrictions are placed on the life of the general education credit to be transferred. The course to be transferred must be applicable to the student's degree program at Lake Area Tech. Credit will not be given for duplication of courses.
2. General education credits fulfilling the Associate of Applied Science degree requirements must be approved by the Director of Enrollment.

transfer of technical studies college credits

In addition to the preceding criteria, the following policies apply:

1. Technical studies credits fulfilling the Associate of Applied Science degree or diploma requirements must substantially match Lake Area Tech's curriculum.
2. The decision to accept specific technical credits will be made at the program level.
3. Time limit for accepting transfer technical credit will be five (5) years. Credits earned more than five (5) years ago must be verified and approved at the Lake Area Tech department level.
4. A minimum of one-third of the technical credits must be from Lake Area Tech in order to be granted a diploma or degree.

transfer of online course credit

Students may transfer online course credits to LATI. The courses must be accredited through a professional accrediting agency and must conform to the requirements of courses as determined by each program. The Director of Enrollment will grant final approval of online course credits regarding the appropriateness and applicability to the student's course of study.

process for transferring diploma credits to a.a.s. degree

Lake Area Tech graduates who have previously received a diploma and desire to receive an A.A.S. degree will be subject to the following conditions:

1. All technical credits must have been earned within the past five (5) years by time of completion. Credits older than five (5) years will be verified at the department level. The verification process may include documentation by current employer or previous employer.
2. Any general education credits transferred in must meet the transfer requirements of Lake Area Tech.
3. Technical education courses must meet the requirements of the current program.
4. Transferring credits for enrolled students is subject to current policy.
5. Non-enrolled students will be charged \$10.00/course for transferring credits.

transferring to a college or university

Lake Area Tech has many formal program-to-program transfer/articulation agreements with private and public colleges and universities in South Dakota and out-of-state. Students who attend and graduate from Lake Area Tech may decide to continue their education with one of the many institutions that have articulation agreements in place. The amount of credits that transfer differ based on the major and college or university selected.

For further information and a complete listing of agreements, go to www.lakeareatech.edu and locate the Articulation Agreement section on the home page.

student records

Student records include the following information:

- LATI transcript (on file permanently)
- Application (on file seven (7) years)
- High school/college transcripts (on file seven (7) years)
- Correspondence (on file seven (7) years)
- Enrollment card (on file permanently)

Any student objecting to information being released by Lake Area Technical Institute may block such release by notifying the Director of Enrollment's Office.

All student records are the property of Lake Area Tech. Upon written request from the student, a copy of the student's admission test results and high school transcript will be provided to a student.

graduation cohort rate

In 2004-2005, the completion or graduation rate for students who entered Lake Area Technical Institute on a full-time basis was 73%. This figure includes students who received a degree or diploma at Lake Area Technical Institute and students who transferred to higher level programs.



student services



Lake Area Tech's student services are designed to assist students in getting the most out of their time at Lake Area Tech. A wide variety of concerns can be dealt with on campus. Lake Area Tech's main objective is helping students to be successful in their training program before and after graduation. Students are encouraged to seek out any of the following services which can assist them.

career guidance

The admissions staff is dedicated to helping students choose the best training program among the options available at Lake Area Tech. Program visits and tours are available any weekday.

student assistance program

Information on preventing drug and alcohol abuse will be presented to all students during the school year. Specific referrals for drug and alcohol-related issues will be made by on-campus counselors. Referrals are directed to NESD Alcohol and Drug Prevention Resource Center when deemed necessary.

library facilities

The Leonard H. Timmerman Library, located in the center of the campus, provides students and staff with access to a variety of physical and electronic resources. The library's collection includes various online databases, books, reference materials, magazines, journals and newspapers. In addition, the LATI Library website is a user-friendly site that puts an abundance of information at students' fingertips. The website helps students with research-based tasks such as locating sources, utilizing sources and citing sources. The library website also links students to the South Dakota Library Network (SDLN), where students can access nearly a million books, full-text journal articles and images suitable for their research needs. SDLN resources are available from home and on campus. Students also have access to the resources and interlibrary loan services of the Watertown Regional Library, located just a few blocks from campus.

At the library, full-time staff is available to assist students in research needs. Services available in the library include computer access, wireless internet access, printers, photocopier and scanner. The library also provides a quiet study space for all students. Library hours are 7:30 a.m. to 9:00 p.m., Monday through Thursday and 7:30 a.m. to 4:00 p.m. Friday. Summer hours may vary.

educational services center

The center, located in the Timmerman Library, is open eight hours daily to assist students with academic concerns and study skill improvement. Students may be referred to the center or may make use of the services offered on their own. Certified instructors are available for tutoring, or students may request peer tutoring in specific areas. An area which can be reserved for study groups is also available.

laptop lease-to-own program

Lake Area Tech has initiated the use of laptop technology because of the requirements placed on the students for

computer usage in particular fields of study. Making laptops available at all times and having the ability to utilize the latest software in a program of study is extremely important to the success of the student and the graduate.

Laptops are required for students enrolled in the Financial Services, Computer Information Systems, Engineering/Architectural Drafting, Agri-Production, Practical Nursing, Occupational Therapy Assistant, Medical Lab Technician, Agri-Business, Marketing/Management/Sales, Robotics, and Electronic Systems Technology programs. All other students have the option to purchase a laptop from the Lake Area Tech Bookstore if they choose.

For more information on the laptop lease-to-own program, students may request a Laptop Lease Program brochure or contact the Lake Area Tech Help Desk.

rotc

Lake Area Tech, in conjunction with South Dakota State University, offers select ROTC classes for any interested student. These classes are tuition-free, include all required course materials, and will transfer to South Dakota State University.

student activities

Student life consists of many activities outside the classroom. Extra-curricular activities provide for many positive social and professional experiences which students may encounter off-campus.

Student Activities include:

- Dances
- Theme Parties
- Go Kart Races
- Pizza Parties
- Fall/Spring Picnics
- Golf
- Intramural Sports
- Miniature Golf
- Talent Contest
- Premier Movies
- Bowling
- Campus Entertainment
- Car Show
- Watertown Community Recreation Center:
- Aerobics
- Weight Program
- Cardiovascular Machines
- Whirlpool
- Swimming Pool
- Indoor Walking/Running Track
- Volleyball
- Racquetball Courts
- Sauna
- Day Care/Preschool
- Doublewide Gymnasium

community activities

The Watertown area has many other activities that students may participate in during their free time. Some of these include:

- Athletic Leagues
- Library
- Boating
- Movies
- Bowling Leagues
- Museums
- Car Races
- Parks
- Church Activities
- Community Theater
- Bike Path
- Cross-Country Skiing
- Snowmobiling
- Fishing
- Tennis
- Golfing
- Water Sports
- Hunting
- Zoo
- Swimming Pools
- Water Park
- Frisbee Golf

campus activities board (cab)

Each year Lake Area Tech students will elect a Campus Activities Board (CAB). The election will take place sometime during the first four weeks of school. This board is made up of a president, vice president, secretary-treasurer and four student representatives. The Campus Activities Board is responsible for planning activities for the student body within a given budget on a year-long basis. The activities range from intramural sports, pizza parties, snow sculpturing, Vikings trips and everything in between. The student body is encouraged to get involved with CAB by casting their vote and also by attending meetings to voice their opinion. Some programs may choose to elect representatives to attend CAB meetings on behalf of their program.

student organizations

A variety of clubs and organizations is available including:

- Tech Club
- American Physical Therapy Assistants Association, Student Chapter
- SkillsUSA-VICA
- Home Builders' Association, Student Chapter
- Post-Secondary Agricultural Student Organization (PASO)
- American Dental Assistants Association, Student Member
- Lab Technology Club
- Occupational Therapy Assistant Club
- Student Medical Assistants Organization
- Campus Crusades for Christ
- Associated General Contractors, AGC Student Chapter
- Automotive Tech Club
- Diesel Tech Club

student ambassadors

Student Ambassadors are selected by their instructors to represent their programs as well as Lake Area Tech. Ambassadors assist with tours, presentations, open houses, conferences, and phonathons.

campus cash

Students who attend Lake Area Tech may open a debit account called Campus Cash. When money has been deposited into the account, the students' ID card will be activated to double as a Campus Cash card. Students may use their Campus Cash card to make purchases in the Lake Area Bookstore and Food Service.

food service – 11th st. grille

Food service facilities are located in the Lake Area Tech Student Center and the Manufacturing Education Center. A wide variety of meals and snacks are served from 6:45 a.m. to 4:00 p.m. each day. The food service operates as a "cash and carry." Students are not required to purchase meal plans.

student center

The Lake Area Tech Student Center is located on the main campus. Students gather in the Student Center for meals, student entertainment, activities, socializing and studying.



intramural sports

The intramural program includes:

- Basketball • Softball • Volleyball • Flag Football

bookstore - 11th st. book & supply

The Lake Area Tech Bookstore stocks all program textbooks and supplies and most uniforms and tools required at Lake Area Tech. Clothing and gift items are also available. The bookstore also sells stamps and cashes student checks.

student identification cards

A student identification card is issued to students that entitles them to attend and participate in events sponsored by Student Services and the Campus Activities Board. If a student desires to utilize the Campus Cash system, the ID card will be activated once a deposit has been made. The card is also used for admittance into the Watertown Community Recreation Center.

lake area tech children's educare center

The center provides day-care and preschool for the children of Lake Area Tech students. Admission to the center is limited. A fee is charged for these services. Contact the Educare Center at 882-5284, Ext. 440 for more information.

equity project

Males and females enrolled in programs that are nontraditional for their gender may be eligible for scholarships and/or stipends. Check with LATI's counseling staff regarding the Equity Project.

car pool information

Many Lake Area Tech students commute to the campus. The Housing Coordinator keeps a record of the car pools available so commuting students can coordinate rides whenever possible. Car pool information may be accessed through the Lake Area Tech website under Student Life.

counseling

Personal counseling is available from the two counselors on staff, whose offices are located in the administrative area and the Educational Services Center. These services are kept confidential. Many situations can be handled on-campus, but occasionally students may be referred to another agency in the community more suited to their needs.

housing

All Lake Area Tech students live off-campus. Lake Area Tech itself does not own or provide any housing. The Lake Area Tech Housing Coordinator keeps a current list of available houses, apartments, sleeping rooms and other rentals which suit the students' needs. Housing information may be obtained by requesting a paper copy or going online to our website. The Housing Coordinator will be glad to offer any assistance possible in this area. Some LATI programs require internships/field work which may shorten a student's stay on campus. Keep this in mind when signing a lease.

financial aid

Financial Aid Office personnel are available to assist students in understanding the wide variety of financial aid available. They will be glad to explain which benefits students are eligible for, and they are available to answer questions when applying for financial aid. There are no age limitations on who can qualify for such aid.

school nurse

A school nurse is available to consult with students about health problems and refer them to the appropriate health care provider in the community. This person is not allowed to dispense medications. A communicable disease policy has been adopted by the Watertown School District. A complete description of this policy is available in the Business Manager's Office.

south dakota career center

An employment representative assists students looking for part-time jobs while attending school. Students may register at the South Dakota Career Center Satellite Office located on campus. The Satellite Office has full access to the statewide South Dakota Career Center computer network and to the Interstate Job Bank.

special facilities for disabled students

Lake Area Tech is recognized as having educational facilities that are accessible to the disabled with mobility impairments. A wheelchair entrance is located at Door 2A near the library and the front entrance of the Technical Education Center. Lake Area Tech complies with the 1973 guidelines established by the U.S. Department of Health, Education and Welfare.

placement

It is the policy of Lake Area Tech to fully assist its graduates in finding suitable and profitable employment. Placement of graduating students is administered through the Placement Office, in cooperation with program instructors.

The Career Center Coordinator receives hundreds of calls year-round from employers who list openings. Many companies send recruiters or make arrangements for company tours to acquaint students with their opportunities.

The Career Center Coordinator has access to all jobs listed with the South Dakota Department of Labor's Career Center System. Students are encouraged to visit the Center any time they are looking for work, either part-time while in school, or full-time after graduation.

insurance

Students attending Lake Area Technical Institute are expected to obtain medical insurance coverage. The school provides no insurance coverage. Student coverage through a private insurance company is made available for those who wish to apply. Please inquire in the Admissions Office.

institutional liability

Lake Area Technical Institute disclaims liability of any kind of injury or illness of any student as a result of participation in intramural sports, student activities, field trips, shop or laboratory work and classroom activities. Every reasonable effort is made to provide safe conditions for these activities.

religious activities

The local churches in Watertown have a primary objective to stimulate the moral and spiritual values of students attending Lake Area Technical Institute. There is active cooperation between the churches and the school. Campus Crusades for Christ organization is also available to all students.

student's right to know and campus security act

In compliance with the Crime Awareness and Campus Security Act of 1990, Lake Area Technical Institute has made available upon request, statistics of criminal offenses that have occurred on campus and the policies and procedures for reporting a criminal action. This information is listed in the Student Handbook.





programs of study



agriculture - agri-business option

agri-business professionals

Agriculture is one of the leading industries in South Dakota and the Midwest. Lake Area Tech has been training agri-business professionals for about 30 years. These highly skilled graduates are needed in every aspect of the agriculture industry, from managing agri-businesses to applying farm chemicals. Students who enter this program can expect to secure employment in agricultural supply businesses.

a strong interest in agriculture is a must!

Students who enter this profession should have an interest in the business side of agriculture. Students must have the ability to relate well with people and the desire to excel in the academic courses required to complete the degree. Upon successful completion of the required courses, graduates are awarded the Associate of Applied Science (A.A.S.) degree.

Lake Area has an active chapter of the Post-Secondary Agricultural Student Organization (PASO) in which ag-business students can participate.

a blend of business and agriculture principles prepares the student for the demands of this profession

Students receive up-to-date instruction in the areas of crops, soils, fertilizers, chemicals, animal science and nutrition, business management, credit and collections, supervision and business law, computers, sales and accounting. Each year of the two-year program includes an Internship or Supervised Occupational Experience (SOE) placement. These Internships and SOE placements allow the student to apply the theory learned in the classroom to the actual job situation.

Field trips and speakers add to the theoretical training provided.

meanwhile, back on the farm . . .

Lake Area Tech manages a demonstration farm in conjunction with various area ag businesses. The demonstration farm is located northwest on County Road 17. Students are involved in the operation and management of the demonstration farm.

job opportunities are plentiful

Due to LATI's history in training ag-business professionals, numerous job sites await successful graduates. Alumni are employed all over the Midwest and graduates should be willing to relocate in order to find the type of job which best meets their needs. A promising future of steady employment, satisfaction and advancement awaits the well-prepared graduate of agri-business!

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Vocational Ag courses, Accounting, Computer, Science, Communications, Biology, English, Math.

agri-business option - 20 months

credits required for graduation: 80

associate of applied science (a.a.s.) degree

agriculture business option courses

ACCT 210	Principles of Accounting I	3 credits
AED 100	Automated External Defibrillator . . . . .	.5 credit
AG 100	Soil Science	3 credits
AG 102	Crop Science	3 credits
AG 122	Fertilizers	2 credits
AG 124	Ag Chemicals	2 credits
AG 200	Animal Nutrition	2 credits
AG 214	Ag Chemical Equipment	2 credits
AG 247	Internship	6 credits
AGR 104	Commodity Merchandising	2 credits
AGR 110	Animal Science	3 credits
AGR 118	Soil and Water Management	2 credits
AGR 120	Seed and Grain Technology	2 credits
AGR 165	Business Supervised Occupational Experience I (SOE)	6 credits
AGR 167	Business Supervised Occupational Experience II (SOE)	5 credits
AGR 202	Livestock Nutrition Problems	2 credits
AGR 236	Business Management I	2 credits
AGR 238	Business Management II	2 credits
AGR 244	Supervision	2 credits
AGR 250	Computer Software Applications for Agriculture	2 credits
BUS 140	Business Law	3 credits
BUS 160	Principles of Selling	3 credits
CIS 102	Windows Applications for Technicians	3 credits
ECON 201	Principles of Microeconomics I	3 credits
ENGL 101	Composition	3 credits OR
COMM 101	Contemporary Communication	3 credits
HAZ 100	Hazardous Materials Safety . . . . .	.5 credit
MATH 100	Applied General Math	3 credits OR
MATH 101	Intermediate Algebra	3 credits
PSYC 100	Psychology of Human Relations	3 credits OR
PSYC 101	General Psychology	3 credits
SPCM 101	Fundamentals of Speech	3 credits
Electives		2 credits
ELECTIVES		
AGR 142	Commercial Pesticide Certification . . . . .	.5 credit
AGR 150	Commercial Drivers License Preparation . . . . .	.5 credit
AGR 162	Co-op Principles	2 credits
AGR 170	Dairy Science	2 credits
AGR 204	Animal Health II	2 credits
AGR 212	Plant Diseases/Insect ID and Control	2 credits
AGR 252	Advanced Nutrition	2 credits
AGR 262	Precision Agriculture	2 credits

agriculture - agri-production option

the demands of modern farming require an education

Because of the enormous changes that have taken place in agriculture in recent years, the individuals who manage today's farms need to be more skilled and knowledgeable than ever before. A successful farmer, whether an owner, renter, manager or crop industry employee, must have a thorough knowledge of the latest farming techniques along with a theoretical base in economics and business practices. The options included in the Agriculture Production program are designed for the student who wishes to return to the farm or ranch.

curriculum can be tailored to meet each student's needs

The Agriculture Production curriculum is very comprehensive, including courses in nutrition, crop science, marketing, fertilizers, livestock development and maintenance, farm machinery, farm management and decision-making. Great attention is also paid to record-keeping, planning and farm accounting.

The program is designed to allow students to return to their farm or ranch operation during the spring semester of the first year and perform extensive record-keeping procedures. Students in the second year are also given the opportunity to work with area agribusinesses and/or veterinarians. Whether a student is returning to east river crop country or west river cattle land, the knowledge needed to run a profitable operation will be found in this curriculum.

the profession requires training and discipline

An individual who enjoys the rural setting, likes being his or her own boss and has the discipline to see projects completed can learn the techniques to be successful in today's highly competitive agricultural environment.

Farm operators must have enough technical knowledge of crops and growing conditions and plant and animal diseases to be able to make decisions that ensure the successful operation of their farms. They must also have the managerial skills necessary to organize and operate a business.

With increases in today's agriculture production costs, the instability of the farmers' market and the increasing competition between American farmers and foreign competitors, the farm operator must be prepared to make informed decisions at the appropriate time.

we practice what we preach

LATI, in cooperation with DuPont, has developed a demonstration farm located northwest on County Road 17. Agriculture Production students are actively involved in management decisions concerning no-till techniques as they are applied to an actual farming operation.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Vocational Ag courses, Accounting, Computer, Science, Communications, Biology, English.

agri-production option - 18 months
credits required for graduation: 73
associate of applied science (a.a.s.) degree

agriculture production option courses

AED 100	Automated External Defibrillator . . . . .	.5 credit
AG 100	Soil Science	3 credits
AG 102	Crop Science	3 credits
AG 106	Animal Health I	2 credits OR
AGR 122	Fertilizers	2 credits
AG 126	Weed Management	2 credits
AG 130	Building Principles	1 credit
AG 132	Ag Structures	2 credits
AG 135	Farm Power/Engines	1 credit
AG 136	Advanced Farm Power	2 credits
AG 158	Farm/Ranch Records	2 credits
AG 200	Animal Nutrition	2 credits
AG 216	Farm Power/Electrical Wiring.	1 credit
AG 218	Advanced Electrical Wiring.	2 credits
AG 221	Machinery Management	2 credits
AG 226	Commodity Marketing	2 credits
AG 228	Advanced Marketing	2 credits
AGR 110	Animal Science.	3 credits
AGR 156	Farm Management I.	2 credits
AGR 169	Production Supervised Occupational Experience I (SOE).	4 credits
AGR 222	Farm Machinery Lab	1 credit
AGR 230	Farm Accounting II.	2 credits
AGR 232	Farm Management II	2 credits
AGR 249	Production Supervised Occupational Experience II (SOE)	4 credits
AGR 250	Computer Software Applications for Agriculture	2 credits
CIS 102	Windows Applications for Technicians	3 credits
HAZ 100	Hazardous Materials Safety . . . . .	.5 credit
Agriculture Electives.		at least 6 credits

ELECTIVES

AG 122	Fertilizers	2 credits
AG 124	Ag Chemicals	2 credits
AG 214	Ag Chemical Equipment	2 credits
AGR 118	Soil and Water Management	2 credits
AGR 120	Seed and Grain Technology.	2 credits
AGR 162	Co-op Principles.	2 credits
AGR 170	Dairy Science	2 credits
AGR 202	Livestock Nutrition Problems	2 credits
AGR 204	Animal Health II	2 credits
AGR 210	Forages and Grasses.	2 credits
AGR 224	Facilities.	1 credit
AGR 252	Advanced Nutrition	2 credits
AGR 262	Precision Agriculture	2 credits
AGR 212	Plant Diseases/Insect ID and Control	2 credits

To fulfill graduation requirements, students must select one course in each of the areas listed. See page 75 for a complete explanation.

Selected Math Course	3 credits
Selected Social Science Course.	3 credits
Selected Communications Course	3 credits
Selected Behavioral Science Course	3 credits

agriculture - dairy option

the dairy industry needs you

Research shows that the current number of dairy operators in the Midwest has declined by fifty-four percent. Factors contributing to this decline includes the amount of capital required to start a dairy, the shortage of trained employees, the difficulty of meeting government regulations, and the lack of current technology and knowledge to make the transition to modern dairy practices. Yet, the need for producers and milk production is growing at a much faster rate than what current dairies can supply.

In order to prosper in the dairy industry today, dairy operators will need to consider evolving into a larger scale operation. Unfortunately, one of the biggest obstacles facing many dairy farmers today is the lack of trained labor to help them with their expansion. The Agri-Production Dairy Option is designed to educate and train individuals for a career in the dairy industry.

you'll get what you need

When students complete the Agri-Production Dairy Option they will be competent in the skills needed to be employed by or even manage a large state-of-the-art dairy operation. Students will be proficient in the areas of animal and dairy science, health and nutrition. They will be able to trouble-shoot problem areas in the dairy herd and learn about farm management and commodity marketing. Students will also complete two supervised occupational experiences utilizing the Midwest Dairy Institute near Milbank, SD. Whether students are returning to a family-owned dairy operation or employed by large corporations, the skills they learn in the dairy option program will be rewarding and profitable.

are you a candidate for the dairy option?

If you are the type of individual who enjoys working outdoors, has a genuine respect for animals, and has the managerial skills necessary to own and/or operate a successful business, this may be the career for you.

With the demand for producing a higher quantity and quality of milk, the dairy operator must be able to make educated decisions about production, nutrition, and health. Most importantly, he or she must be able to keep accurate and consistent records on the dairy herd.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Ag Courses, Accounting, Computer, Biology, Science, English.

**agri-production dairy option -
11 months
credits required for graduation: 40**

agri-production dairy option courses*

AED 100	Automated External Defibrillator . . . . .	.5 credit
AG 106	Animal Health I	2 credits
AG 135	Farm Power/Engines	1 credit
AG 136	Advanced Farm Power	2 credits
AG 158	Farm/Ranch Records	2 credits
AG 200	Animal Nutrition	2 credits
AGR 104	Commodity Merchandising	2 credits
AGR 110	Animal Science	3 credits
AGR 156	Farm Management I	2 credits
AGR 169	Production Supervised Occupational Experience I	4 credits
AGR 170	Dairy Science	2 credits
AGR 202	Livestock Nutrition Problems	2 credits
AGR 204	Animal Health II	2 credits
AGR 210	Forages and Grasses	2 credits
AGR 224	Facilities	1 credit
AGR 232	Farm Management II	2 credits
AGR 249	Production Supervised Occupational Experience II	4 credits
AGR 250	Computer Software Applications for Agriculture	2 credits
AGR 252	Advanced Nutrition	2 credits
HAZ 100	Hazardous Materials Safety . . . . .	.5 credit

* These courses can be applied toward completion of an Associate of Applied Science (A.A.S.) Degree in Agri-Production. 36 additional credits are required.

automotive technology

basic qualifications

People with mechanical aptitudes, good finger dexterity and the ability to work on a problem until it's solved will want to consider a career as an automotive technician.

Anyone who has enjoyed high school classes in basic electronics or auto mechanics and has adequate math and reading skills is likely to be successful in the Automotive Technology program at Lake Area Technical Institute.

expect to get under the hood

The 18-month degree program uses a combination of classroom instruction and practical application to train students to do quality work and to operate modern diagnostic equipment. The clean, up-to-date 15,000 square-foot shop is filled with a variety of late-model cars. This program provides hands-on lab experience under the close supervision of the instructors. Time cards, a parts department, work orders and a complete array of electronic service information add to the "real work" environment.

trading up

There are several options for Automotive Technology students to increase their employment opportunities.

For instance, Lake Area Technical Institute participates in the Toyota Technical Education Network (T-TEN) program. Students attending the T-TEN classes will get hands-on experience working on Toyota vehicles with state-of-the-art equipment. Toyota offers both tuition and tool scholarships to qualified students.

Also, students who join the LATI chapter of SkillsUSA-VICA heighten their communication and public relations skills as well as gain the opportunity to compete in regional contests.

on the road to success

Graduates leave here ready for entry-level positions at auto dealerships, independent garages, auto service centers or fleet maintenance centers. With experience, many alumni have advanced to service manager positions, opened their own repair shops or used their mechanical skills to become key employees in manufacturing settings.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Basic Electronics, Algebra, Science, Vocational Auto, Computer, Physics, Communications, Math.

18 months

credits required for graduation: 72
associate of applied science (a.a.s.) degree

automotive technology courses

AED 100	Automated External Defibrillator . . . . .	.5 credit
AT 100	Safety . . . . .	.5 credit
AT 107	Brake Systems Theory	3 credits
AT 108	Brake Systems Lab	4 credits
AT 119	Alignment, Suspension, Steering, Axle Theory	3 credits
AT 122	Alignment, Suspension, Steering, Axle Lab	4.5 credits
AT 146	Heating and Air Conditioning Theory	2 credits
AT 148	Heating and Air Conditioning Lab	3 credits
AT 155	Electrical/Electronic Systems Theory	3.5 credits
AT 156	Electrical/Electronic Systems Lab	6 credits
AT 201	Manual Drive Train/Transaxle Theory	2 credits
AT 208	Manual Drive Train/Transaxle Lab	3 credits
AT 212	Automatic Transmissions/Transaxle Theory	2 credits
AT 217	Automatic Transmissions/Transaxle Lab	3 credits
AT 221	Engine Repair Theory	2 credits
AT 225	Engine Repair Lab	3 credits
AT 259	Engine Performance Theory	4 credits
AT 263	Engine Performance Lab	8 credits
CIS 102	Windows Applications for Technicians	3 credits

To fulfill graduation requirements, students must select one course in each of the four areas listed. See page 75 for a complete explanation.

Selected Mathematics Course	3 credits
Selected Behavioral Science Course	3 credits
Selected Communications Course	3 credits
Selected Social Science Course	3 credits



Lake Area Tech has entered an agreement with Toyota Motor Sales, U.S.A., Inc. to teach Toyota Technical Education Network (T-TEN) classes. Students attending these classes will get hands-on experience working on Toyota vehicles and state-of-the-art equipment. Contact the school for further details.

aviation maintenance technology

be part of the exciting field of aviation

Students enrolled in Aviation Maintenance Technology are trained in all mechanical, electrical and structural areas of airplanes. Aviation maintenance technicians are required to be certified by the Federal Aviation Administration (FAA). Lake Area Tech is a FAA-approved Aviation Maintenance Technician school. The FAA issues two licenses: the airframe and the powerplant certifications. Certification consists of written, oral and practical examinations which are administered following successful completion of each year of the training program.

and there's plenty of variety

Students attending this program study a wide array of subject areas ranging from physics and aerodynamics to engine thrust reverse systems and aircraft structures. In this program, students have the option to obtain the Associate of Applied Science (A.A.S.) degree by successfully completing the required courses.

employment opportunities

Job opportunities exist in nearly every segment of the aircraft maintenance community. Primary sources of employment include fixed-base operators; certified repair stations; corporate airplanes; commuter, regional and international air carriers as well as state and federal agencies. Whatever the use of an aircraft or wherever an aircraft is located, a licensed aviation maintenance technician must be involved in the servicing and maintenance of the aircraft.

Lucrative salaries, professional recognition and career mobility await those individuals willing to remain abreast of tomorrow's changing technology.

wild blue yonder

Travel privileges, attractive fringe benefits and additional compensations are added work incentives for the aviation maintenance technician.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Science (Physics), Algebra, Vocational Mechanics, Chemistry, Math and Communications.

19 months

credits required for graduation: 76
associate of applied science (a.a.s.) degree
credits required for graduation: 92

aviation maintenance technology courses

*AC 100	Applied Communications	1 credit
AVM 100	Federal Aviation Regulation Publications.	1.5 credits
AVM 103	Applied Mathematics/ Aircraft Weight and Balance	2.5 credits
AVM 106	Physics/Aerodynamics.	1.5 credits
AVM 109	Ground Operations and Servicing.	1 credit
AVM 112	Aircraft Drawings.	1.5 credits
AVM 115	Materials and Processes.	2 credits
AVM 118	Shop Practices and Safety	2 credits
AVM 121	Basic Electricity	2.5 credits
AVM 124	Welding and Tubular Structures.	1 credit
AVM 127	Corrosion Control and Cleaning	2 credits
AVM 130	Assembly and Rigging	1.5 credits
AVM 133	Aircraft Fuels and Fuel Systems	1 credit
AVM 136	Non-Metallic/Composite Structures.	3 credits
AVM 139	Metallic Structures	3 credits
AVM 142	Hydraulic and Pneumatic Power Systems/ Lines and Fittings	2 credits
AVM 145	Landing Gear Systems	2 credits
AVM 148	Airframe Electrical Systems.	3 credits
AVM 151	Airframe Instrument Systems.	1 credit
AVM 154	Communication and Navigation Systems I.	2 credits
AVM 157	Utility Systems.	2.5 credits
AVM 160	Environmental Systems	1.5 credits
AVM 163	Airframe Inspections.	2 credits
AVM 200	Airframe Independent Study.	1.5 credits
AVM 203	Reciprocating Engine Theory.	1.5 credits
AVM 206	Reciprocating Engine Maintenance and Overhaul	3 credits
AVM 209	Engine Removal and Installation	1.5 credits
AVM 212	Gas Turbine Engine Technology	2 credits
AVM 215	Gas Turbine Engine Service and Maintenance.	3 credits
AVM 218	Lubricants and Lubrication Systems	2 credits
AVM 221	Fuels and Fuel Metering Systems	2 credits
AVM 224	Fire Protection Systems . . . . .	.5 credit
AVM 227	Propellers and Rotor Systems	2.5 credits
AVM 230	Ignition and Starting Systems.	2.5 credits
AVM 233	Induction and Supercharger Systems.	1 credit
AVM 236	Powerplant Electrical Systems	2.5 credits
AVM 239	Cooling Systems. . . . .	.5 credit
AVM 242	Exhaust and Thrust Reverser Systems. . . . .	.5 credit
AVM 245	Powerplant Instrument Systems.	1 credit
AVM 248	Powerplant Inspections	1 credit
AVM 251	Communications and Navigation Systems II	2 credits
AVM 254	Powerplant Independent Study	1.5 credits
CSC 100	Microcomputer Concepts	1 credit

ADDITIONAL COURSES FOR A.A.S. DEGREE

To fulfill requirements for the A.A.S. degree, students must select one course in each of four areas plus two additional general education courses, thus completing 18 credits in general education. (CIS 105 or CIS 102 may be used as one of the additional courses and substituted for CSC 100.) See page 75 for a complete explanation.

*EN 110 or ENGL 101 may be substituted for AC 100 to facilitate progress toward the associate degree.

Selected Math Course	3 credits
Selected Behavioral Science Course	3 credits
Selected Communications Course.	3 credits
Selected Social Science Course.	3 credits

building trades technology

who's cut out for building trades technology?

People who enjoy working with their hands and following a project from start to finish, who don't mind working in a variety of weather conditions, who aren't afraid of heights and who exhibit physical dexterity will find satisfaction in a building trades career. The ability to get along with all types of people is important. Workers in this field need to build relationships with contractors, co-workers and clients. A background that includes courses in industrial arts, math, communications, English and drafting would be helpful as well.

learn from the ground up

The Building Trades Technology program at Lake Area Technical Institute follows curriculum guidelines set forth by the Associated General Contractors of America. During the 18-month program, students gain optimal practical experience, in addition to their classroom instruction. In fact, students actually plan, draw and build a home to a client's specifications and satisfaction. Students also learn the latest technology dealing with energy conservation and implement these concepts in the building projects.

adding on

Students may also participate in the LATI chapter of the National Homebuilders Association and SkillsUSA-VICA to enhance their communications and public relations skills, as well as compete in regional skills contests.

Another optional, but popular, activity is the annual field trip to the National Home Builders Association Convention, for which students build various small projects to help raise funds.

climb the ladder to success

Carpentry provides a key service to society, meeting the demand for new housing and commercial buildings and for renovating and modernizing existing structures. Jobs are available in almost every locale, rural as well as urban. Primary sources of employment for LATI graduates include commercial contractors, maintenance shops, woodworking shops, sash and door companies, furniture manufacturers, repair shops and home contractors. Many alumni have gone into business for themselves after a few years of practical experience.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Math, Vocational Building Trades, Communications, Drafting.

18 months

credits required for graduation: 72
associate of applied science (a.a.s.) degree

building trades technology courses

AED 100	Automated External Defibrillator . . . . .	.5 credit
BTT 116	Construction Technology I	7.25 credits
BTT 117	Construction Practicum I	7.25 credits
BTT 125	Cabinetry	3 credits
BTT 131	Interior Finishing	2 credits
BTT 147	Construction Practicum II	4.5 credits
BTT 156	Residential Drafting/CAD	2.5 credits
BTT 202	Construction Technology II	4 credits
BTT 209	Construction Practicum III	11 credits
BTT 220	Construction Estimating	3 credits
BTT 235	Construction Practicum IV	10 credits
BTT 252	Advanced Construction Technology	2 credits
CIS 102	Windows Applications for Technicians	3 credits

To fulfill graduation requirements, students must select one course in each of the four areas listed. See page 75 for a complete explanation.

Selected Mathematics Course	3 credits
Selected Behavioral Science Course	3 credits
Selected Communications Course	3 credits
Selected Social Science Course	3 credits

** Students who have two transfer credits in Computer Science are not required to take CIS 102. Instead, they should register for BTT 190 - Independent Study (one credit)*

business accounting option

balancing it all

Accounting is an option of the Financial Services program. This option provides students interested in small business accounting the knowledge needed to step in and use an existing accounting system or implement a new system. Payroll, Cost Accounting, Corporate Accounting and Office Management are a few of the areas emphasized.

LATI students in this program will benefit from the practical, hands-on training with accounting software (Quick Books and Peachtree Accounting) that is a part of the curriculum. Students also participate in the Volunteer Income Tax Assistance program sponsored by the IRS, in which students provide free income tax preparation to low-income and elderly people.

a career to count on

Graduates of the Business Accounting Option program are qualified for a variety of jobs, ranging from payroll clerks to office managers. As the economy grows, the number of business establishments increase, requiring more accountants to set up books, prepare taxes and provide management advice.

Accounting personnel rarely lose their jobs when other workers are laid off as financial information must be developed, regardless of the state of the economy. Potential employers include banks, business firms, heavy industry and insurance companies. By understanding the world of finance and its many relationships, students in the program can choose a suitable career direction.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: English, Accounting, Business Law, Algebra, Computer, Keyboarding.

20 months

credits required for graduation: 75
associate of applied science (a.a.s.) degree

business accounting option courses

AC 100	Applied Communications . . . . .	.5 credit
ACCT 210	Principles of Accounting I	3 credits
ACCT 211	Principles of Accounting II	3 credits
ACCT 214	Cost Accounting	3 credits
ACCT 218	Tax Accounting I	3 credits
ACCT 220	Computer and Accounting Applications I	3 credits
ACCT 222	Payroll Accounting	3 credits
ACCT 224	Financial Statement Analysis	3 credits
ACCT 230	Principles of Accounting III	3 credits
ACCT 233	Principles of Accounting IV	3 credits
ACCT 237	Applied Federal Income Tax	3 credits
AED 100	Automated External Defibrillator . . . . .	.5 credit
BUS 103	Management Seminars I . . . . .	.5 credit
BUS 106	Management Seminars II . . . . .	.5 credit
BUS 140	Business Law	3 credits
BUS 160	Principles of Selling	3 credits OR
BUS 120	Principles of Marketing	3 credits
BUS 220	Personal Finance	3 credits
BUS 236	Financial Management	3 credits
BUS 239	Management Seminars III . . . . .	.5 credit
BUS 242	Management Seminars IV . . . . .	.5 credit
BUS 246	Internship A	3 credits
BUS 247	Internship B (or Elective for 3 credits)	3 credits
CIS 105	Microcomputer Software Applications	3 credits
CIS 125	Advanced Microcomputer Applications	3 credits
ECON 201	Principles of Microeconomics I	3 credits
ECON 202	Principles of Macroeconomics II	3 credits
ENGL 101	Composition	3 credits
MATH 101	Intermediate Algebra	3 credits
PSYC 101	General Psychology	3 credits OR
PSYC 100	Psychology of Human Relations	3 credits
SPCM 101	Fundamentals of Speech	3 credits

BUS 120 Professional Marketing may be substituted for BUS 160 - Principles of Selling.

computer information systems

cis offers four options

Lake Area Technical Institute offers training for exciting careers in computer programming, networking, Cisco/Networking, Graphic and Web Design. All of these programs are 20 months in length. The first semester for each of the four options is the same, so students can wait to decide in what area they want to specialize.

if you enjoy . . .

If you enjoy working with detail, thinking logically and troubleshooting problems, you should consider one of the four computer areas. All training is conducted on the newest personal and mid-sized computers.

employment opportunities

The job market continues to grow with the increasing use of personal computers in the business environment. As advances in technology continue, the need for trained technicians and programmers increases. A career in the computer field pays well and offers good advancement possibilities with corresponding rewards.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Math, Accounting, Communications, General Business, English and Computer Concepts.

computer information systems courses

AED 100	Automated External Defibrillator . . . . .	.5 credit
CIS 100	PC Maintenance	3 credits
CIS 126	Computer Software Apps/CIS	3 credits
CIS 132	Intro to Computer Programming	3 credits
CIS 140	Data Base Design and SQL	3 credits
CIS 141	Web Design and Maintenance	3 credits
CIS 290	System Analysis and Design	3 credits
NET 111	CCNA 1 - Networking Basics	3 credits
NET 126	Basic Digital and Theory Applications	3 credits
	Social Science Elective	3 credits
	Communications Elective	3 credits
	Math Elective	3 credits
	Behavioral Science Elective	3 credits
SPCM 101	Fundamentals of Speech	3 credits

To fulfill graduation requirements, students must select one course in each of the areas listed. Courses marked with an asterisk can be transferred directly to the university system under the terms of articulation agreements.

Behavioral Science Electives (Choose 1)

PSYC 100	Psychology of Human Relations
PSYC 101	General Psychology*

Communications Electives (Choose 1)

EN 110	Business Communication
ENGL 101	Composition*

Math Electives (Choose 1)

MATH 100	Applied General Math
MATH 101	Intermediate Algebra
MATH 102	College Algebra*

Social Science Electives (Choose 1)

ECON 101	Economic Geography
ECON 201	Principles of Microeconomics I*
SOC 100	Introduction to Sociology*

ADDITIONAL COURSES REQUIRED FOR NETWORK SPECIALIST OPTION

ACCT 210	Principles of Accounting I (Opt.)	3 credits
CIS 155	Windows Operating System	3 credits
CIS 160	UNIX Operating System	3 credits
CIS 215	Cyber Security/Ethical Hacking	3 credits

20 months

credits required for graduation:

network specialist option: 76.5

programming specialist option: 76.5

graphic/web design specialist: 76.5

network specialist/cisco option: 78.5

associate of applied science (a.a.s.) degree

CIS 200	Advanced PC Maintenance - A+ Certification	3 credits
CIS 235	Computer Crime Investigation	3 credits
CIS 260	UNIX OS Administration	3 credits
CIS 265	Technical Communications	3 credits
CIS 280	Windows Server Administration	3 credits
CIS 299	Internship	4 credits
NET 101	Network Cabling	3 credits
NET 121	Routers and Routing Basics	3 credits
NET 131	Switching Basics and Intermediate Routing	3 credits
NET 141	WAN Technologies	3 credits

ADDITIONAL COURSES REQUIRED FOR PROGRAMMING SPECIALIST OPTION

ACCT 210	Principles of Account I	3 credits
CIS 127	Access Application Development	3 credits
CIS 136	Intro to Object-Oriented Programming	3 credits
CIS 170	Principles of Graphic Design	3 credits
CIS 232	Advanced Visual Basic	3 credits
CIS 238	Advanced JAVA Programming	3 credits
CIS 270	Intro to Database Programming	3 credits
CIS 272	Client/Server Programming	3 credits
CIS 273	Web Applications - ASP	3 credits
CIS 276	Web Applications - PHP	3 credits
CIS 299	Internship	4 credits
CIS 252	Multimedia Production and Integration	3 credits OR
CIS 253	Computer Graphics	3 credits OR
CIS 254	Animation	3 credits

ADDITIONAL COURSES REQUIRED FOR GRAPHIC/WEB DESIGN SPECIALIST

ACCT 210	Principles of Accounting I	3 credits
CIS 127	Access Application Development	3 credits
CIS 160	UNIX Operating System	3 credits
CIS 170	Principles of Graphic Design	3 credits
CIS 241	Advanced Web Design	3 credits
CIS 252	Multimedia Production/Integration	3 credits
CIS 253	Computer Graphics	3 credits
CIS 254	Animation	3 credits
CIS 273	Web Applications - ASP	3 credits
CIS 276	Web Applications - PHP	3 credits
CIS 299	Internship	4 credits
NET 101	Network Cabling	3 credits OR
BUS 152	Desktop Publishing	3 credits OR
CIS 232	Advanced Visual Basic	3 credits

ADDITIONAL COURSES REQUIRED FOR NETWORK SPECIALIST/CISCO OPTION

CIS 160	UNIX Operating System	3 credits
CIS 215	Cyber Security/Ethical Hacking	3 credits
CIS 260	UNIX OS Administration	3 credits
CIS 265	Technical Communications	3 credits
CIS 280	Windows Server Administration	3 credits
NET 101	Networking Cabling	3 credits
NET 121	Routers and Routing Basics	3 credits
NET 131	Switching Basics and Intermediate Routing	3 credits
NET 141	WAN Technologies	3 credits
NET 151	Advanced Routing	3 credits
NET 161	Remote Access	3 credits
NET 171	Multilayer Switching	3 credits
NET 181	Networking Troubleshooting	3 credits

Get your Computer Information Systems degree online.

For more information, go to www.lakeareatech.edu

cosmetology

cosmetologists bring style to our lives

To look good is to feel good, and cosmetologists help us to look our best! Cosmetology is a rewarding occupation. It's a career path for those who enjoy working with people and those who get personal satisfaction from helping others. Cosmetology is also a profitable career where enterprising individuals can own and operate their own beauty salons.

and there's plenty of variety

The Cosmetology program at Lake Area Technical Institute provides theory and practical experience for the student. The program is designed to train the student in the various skills of hair-care techniques, manicuring and skin care.

The cosmetologist studies the fundamentals of this science and applies what is learned in class to practical experience in the Lake Area Tech Cosmetology Lab. He or she applies artistic talents in cutting, styling, shaping and tinting hair along with applying cosmetics.

All students are required to take a board examination administered by the South Dakota Cosmetology Commission.

cosmetology is more than skin deep

Anyone who enjoys people, has artistic ability and possesses a desire to serve the public would enjoy this people-oriented profession.

Cosmetologists do more than make people look good on the outside; they also play an important role in making people feel good about themselves. People who reach their goals in this profession gain much satisfaction from their jobs and their relationships with other people.

job opportunities

Cosmetology provides numerous opportunities. A cosmetologist may work as a hair stylist, research technician, platform artist, make-up artist, nail technician, competition artist, manufacturer's representative, salon owner or school owner. Cosmetology is a career where the individual decides how far he or she wants to go.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Communications, Science, Health, Bookkeeping and Math.

13 months

credits required for graduation: 54

cosmetology courses

AC 100	Applied Communications	1 credit
COS 100	Safety/Sanitation	1.5 credits
COS 103	Salon Management . . . . .	.5 credit
COS 106	Permanent Waving	2.75 credits
COS 112	Haircutting	2.5 credits
COS 115	Hairstyling	8 credits
COS 121	Scientific Concepts	1.25 credits
COS 127	Safety/Sanitation	1 credit
COS 130	Salon Management	1.5 credits
COS 133	Permanent Waving	3 credits
COS 136	Haircolor	4 credits
COS 139	Haircutting	4 credits
COS 145	Esthetics	2.5 credits
COS 148	Manicure . . . . .	.5 credit
COS 151	Chemical Relaxing	1 credit
COS 154	Electricity . . . . .	.5 credit
COS 203	Salon Management	1.5 credits
COS 206	Esthetics	1.25 credits
COS 209	Massage	1.25 credits
COS 212	Haircutting	1.25 credits
COS 215	Hairstyling	2 credits
COS 218	Esthetics	2.25 credits
COS 221	Manicure	2.5 credits
COS 224	Pre-Clinical	4.75 credits
COS 227	Laws . . . . .	.5 credit
COS 230	Haircolor	1.25 credits

dental assisting

a career with responsibility

If you like helping people, enjoy working with your hands as well as your mind, and want a career with responsibility, a career as a dental assistant may be for you.

The dental assistant is the dentist's "right arm." Assistants greatly increase the efficiency of the dentist in the delivery of oral health care and are valuable members of the dental team.

what are the advantages of a dental assisting career?

- *Variety:* Dental assistants have one of the most diverse and interesting of all positions in a dental office. The dental assistant performs a wide range of tasks requiring both interpersonal and technical skills. Dental assisting is a real challenge, demanding versatility and a willingness to assume responsibility for many different tasks.
- *Flexibility:* Career options include both full-time and part-time positions. Since dental assistants are in demand, they may have some flexibility in choosing their hours.
- *Excellent working conditions:* Dental offices are interesting, pleasant, people-oriented environments in which to work.
- *Personal satisfaction:* Dental assisting involves contact with people, and with this personal interaction comes the satisfaction of knowing you've really helped someone by providing a valuable health service.

what qualities are needed?

A person pursuing this career must possess excellent interpersonal skills, manual dexterity and excellent personal grooming and hygiene.

job opportunities

Since dental offices employ many dental assistants, employment opportunities in this field are broad. Positions are available in private and group practices for general dentists as well as in specialty practices such as oral surgery, orthodontics, periodontics, endodontics and pediatric dentistry. Other sources of employment include public health dentistry, hospitals, dental school clinics and insurance companies.

The Dental Assisting program combines theory and practice, offering a comprehensive and practical education to students. Dental assisting students take what they learn in the classroom and implement those skills in a lab setting. Students gain vital hands-on experience that will prepare them for success when they enter the workforce.

accreditation

The Dental Assisting program is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of "Approval." The Commission is a special accrediting body recognized by the Commission on Recognition of Post-Secondary Accreditation and by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-2698 or at 211 East Chicago Avenue, Chicago, IL 60611.

All graduates are eligible to complete the Dental Assisting National Board and meet all requirements to be registered in radiology and expanded functions by the South Dakota Board of Dentistry.

11 months – credits required for graduation: 41.5

20 months – optional associate of applied science (a.a.s.) degree

credits required for graduation: 71.5

To be accepted into this program, the American Dental Association requires all applicants to have a high school diploma or GED.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Health, Science, Biology, Computer and Human Relations.

dental assisting courses

AC 100	Applied Communications	1 credit
CPR 110	CPR for the Professional Rescuer	1 credit
DA 101	Introduction to Dentistry	2 credits
DA 105	Preclinical Science	2 credits
DA 110	Head and Neck Anatomy	3 credits
DA 115	Medical Terminology	1 credit
DA 120	Preventive Dentistry	3 credits
DA 126	Chairside Assisting I	4 credits
DA 135	Dental Materials I	2.5 credits
DA 141	Pharmacology and Medical Emergencies	2 credits
DA 152	Chairside Assisting II	3 credits
DA 156	Developing Professional Skills	1.5 credits
DA 160	Dental Materials II	2 credits
DA 165	Dental Radiology I	2 credits
DA 170	Dental Radiology II	2.5 credits
DA 176	Office Procedures	2 credits
DA 181	Psychology and Human Relations	1 credit
DA 190	Orthodontics	2 credits
DA 210	Clinical Practice and Expanded Functions	4 credits

ADDITIONAL COURSES FOR A.A.S. DEGREE

ANAT 142	Anatomy	3 credits
CHEM 106	Inorganic Chemistry Lecture	3 credits
CHEM 107	Inorganic Chemistry Lab	1 credit
CHEM 108	Organic Chemistry Lecture	3 credits
CHEM 109	Organic Chemistry Lab	1 credit
ENGL 101	Composition	3 credits
MATH 102	College Algebra	3 credits
MICR 231	General Microbiology	4 credits
PSYC 101	General Psychology	3 credits
SPCM 101	Fundamentals of Speech	3 credits
SOC 100	Introduction to Sociology	3 credits

Note: Students interested in pursuing Dental Hygiene should check with their school of choice regarding current general education requirements.

diesel technology

america runs on diesel!

- Diesel powered farm equipment is responsible for preparing the soil, fertilizing, planting, harvesting and the myriad of other tasks performed on the typical farm.
- Diesel powered trucks, trains and ships carry the grain and live-stock to market.
- Diesel-powered trucks carry manufactured or processed products to consumers.
- Diesel powered construction equipment builds the bridges and roads that criss-cross the country.
- Clean-burning, reliable diesel-powered generator sets provide emergency power for vital facilities such as hospitals and municipal utilities.

From the food you eat to the clothes you wear, diesel powered equipment has played an integral part in the whole process.

America runs on diesel!

a strategy for success!

All Diesel Technology first-year students receive training in the areas of small engines, truck/industrial gas engines, power trains, hydraulics, electrical systems, welding, HVAC (Heating, Ventilation and Air Conditioning) and basic computer skills. They also learn general shop practices including safety, CPR/first responder and hazardous waste management.

Diesel Technology second-year students pursuing the *ag/industrial (tractor) option* receive training in the areas of diesel engine overhaul, hydraulic system diagnostics, HVAC system diagnostics, tractor electrical system diagnostics, fuel injection systems, diesel engine tune up and combine electrical/hydraulic system familiarization. Students diagnose and repair customer-owned equipment during general shop production.

Students pursuing the *heavy truck option* receive training in the areas of diesel engine overhaul, diesel fuel systems, diesel engine tune-up and troubleshooting, truck electrical systems, electronic diesel engine controls, truck drive trains, air brake systems, suspension and steering and preventive maintenance. "Hands-on" training is emphasized and students spend much of their time learning by performing actual repair work on customer-owned trucks.

industry connections

A cooperative training agreement between Lake Area Tech and Case New Holland Corporation provides diesel instructors and students with access to the latest industry equipment technology and diagnostic procedures. In addition, students participate in a week-long training program called "*Failure Analysis*," provided courtesy of Butler Machinery Company. The nationally-recognized program about large engine failures was developed by the Caterpillar Company.

employment opportunities

Graduates of the Diesel Technology agricultural/industrial option are employed by farm equipment dealers, independent equipment repair shops, construction firms, diesel injection equipment repair shops, large farm repair shops and maintenance facilities and maintenance facilities for industry.

Graduates of the Diesel Technology truck option are employed by truck dealers, truck fleets, bus lines, heavy equipment shops, construction firms and independent repair shops. A diesel technology career often leads to positions in equipment and part sales, as well as management positions at all levels.

ASE master certified program

The Board of the National Institute of Automotive Service Excellence

18 months

credits required for graduation -

agriculture/industrial (tractor) option: 72

truck option: 72

associate of applied science (a.a.s.) degree

(ASE) granted the Lake Area Technical Institute Diesel Technology program "*Master Certification*" status after evaluating the program's curriculum, equipment and facilities. All diesel instructors are ASE certified as well.

recommended background courses

Although not required, background courses in the following areas would be beneficial prior to attending Lake Area Technical Institute: vocational agriculture and/or auto mechanics, math, communications, science, and basic computer concepts.

diesel technology courses

AED 100	Automated External Defibrillator	.5 credit
CIS 102	Windows Applications for Technicians	3 credits
DT 107	Welding Technologies	1 credit
DT 108	Consumer Products Theory	.5 credit
DT 113	Consumer Products Shop	1 credit
DT 119	Hydraulics Systems Theory	1.5 credits
DT 123	Hydraulics Systems Shop	2.5 credits
DT 126	Basic Engine Overhaul Theory	1 credit
DT 131	Basic Engine Overhaul Shop	3 credits
DT 140	Electrical Systems Theory	1 credit
DT 146	Electrical Systems Shop	2.5 credits
DT 152	Power Trains Theory	1.5 credits
DT 161	Power Trains Shop	3 credits
DT 165	Heating, Ventilation and Air Conditioning Theory	1.5 credits
DT 167	Heating, Ventilation and Air Conditioning Shop	2 credits
DT 173	Preventive Maintenance Theory	1 credit
DT 176	Preventive Maintenance Shop	1.5 credits
DT 179	Basic Diesel Engines Theory	.5 credit
DT 180	Basic Diesel Engines Shop	1 credit
DT 200	Diesel Fuel System Diagnostics Theory	1.5 credits
DT 201	Diesel Fuel System Diagnostics Shop	2 credits
DT 202	Diesel Engine Overhaul Shop	2 credits
DT 210	Diesel Engine Overhaul Theory	1.5 credits
DT 219	Diesel Engine Tune-Up Theory	1.5 credits
DT 223	Diesel Engine Tune-Up Shop	2 credits
HAZ 100	Hazardous Materials Safety	.5 credit

ADDITIONAL COURSES FOR AGRICULTURAL/INDUSTRIAL (TRACTOR) OPTION

DT 234	Tractor Shop Production I	.5 credit
DT 242	Tractor Electrical System Diagnostics	1.5 credits
DT 245	Hydraulic System Diagnostic Theory	1.5 credits
DT 267	Shop Management	.5 credit
DT 278	Combine Hydraulic and Electrical Familiarization	1 credit
DT 282	Tractor Shop Production II	7 credits
DT 288	Hydraulic Systems Diagnostics Shop	2.5 credits
DT 291	Tractor Electronic Controls/Global Positioning Systems and Auto Steer	2.5 credits

ADDITIONAL COURSES FOR TRUCK OPTION

DT 216	Truck Suspension and Steering	4 credits
DT 217	Truck Brake Systems	4 credits
DT 220	Truck Preventive Maintenance	1.5 credits
DT 225	Truck Electrical Testing	2 credits
DT 229	Electronic Engine Controls	3 credits
DT 231	Truck Drive Trains	2 credits
DT 262	Tractor HVAC System Diagnostics	1.5 credits
DT 264	Truck HVAC System Diagnostics	2 credits
DT 265	ASE Certification Testing	1 credit

To fulfill graduation requirements, students must select one course in each of the four areas listed. See page 75 for a complete explanation.

Selected Math Course	3 credits
Selected Behavioral Science Course	3 credits
Selected Communications Course	3 credits
Selected Social Science Course	3 credits

electronic systems technology

electronics and our daily lives

Electronic technology is a part of our everyday lives. It is the core component and central nervous system of modern manufacturing techniques and business communications. Contemporary society depends on this technology, and the evolution of applied electronics continues at an ever-increasing pace.

challenge and opportunity

Electronic technicians have skills that include surface mount technology, product testing and quality control. The industries that utilize such technicians include those that manufacture displays, computers, components, test equipment, automated machines, medical products and circuit boards.

The electronic technician is involved in every aspect from design to manufacturing to technical support. Businesses involved are visual communications, manufacturing, electronic distributors and machine safety products.

New opportunities in the electronics field emerge almost daily as research, development and marketing continue to grow and expand.

who can be an electronic systems technician?

Electronic systems technicians are involved in arranging work schedules, completing orders, helping with sales and representing the employer positively through professionalism, work habits and contacts with customers. They will have to communicate clearly and maintain positive relationships with co-workers, management and customers. Organizational and people skills such as those listed above are essential for success.

Students entering the program are also expected to have a strong background in basic math with some experience in algebra and trigonometry. Knowledge of physics or principles of technology and computer literacy is also helpful.

career opportunities

Technicians work with electronic devices in many industries including printed circuit board design, electronics, manufacturing and the list goes on.

The supply of competent technicians never meets the constantly increasing demand. Graduates of the Electronic Systems Technology program enter a field that provides continuous change, unparalleled advancement opportunities and tremendous challenges.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Math, Algebra, Physics, Computer, Communications and English.

18 months

credits required for graduation: 72
associate of applied science (a.a.s.) degree

electronic systems technology courses

AED 100	Automated External Defibrillator . . . . .	.5 credit
CIS 102	Windows Applications for Technicians	3 credits
EST 103	Principles of DC Circuits Theory	3 credits
EST 106	Principles of DC Circuits Lab	3 credits
EST 109	Principles of AC Circuits Theory	3 credits
EST 112	Principles of AC Circuits Lab	3 credits
EST 115	Electronic Devices I Theory	3 credits
EST 118	Electronic Devices I Lab	3 credits
EST 121	Digital Theory	3 credits
EST 124	Digital Lab	3 credits
EST 246	Circuit Board Design and Layout	4 credits
EST 247	Microcontrollers BS2	4 credits
EST 250	Electronic Devices II Theory	2 credits
EST 252	Electronic Devices II Lab	3 credits
EST 267	Rework, Repair and Surface Mount Soldering	1.5 credits
EST 271	Electronic Devices III	4 credits
HAZ 100	Hazard Materials Safety . . . . .	.5 credit
RBTC 200	Blueprint Reading/Solid Modeling	3 credits
RBTC 202	Robotic Engineering	3 credits
RBTC 205	Programmable Logic Controllers	4 credits
RBTC 207	Fluid Power	2 credits
RBTC 210	Mechanical Systems	1.5 credits
*MATH 100	Applied General Math	3 credits

To fulfill graduation requirements, students must select one course in each of the three areas listed. See page 75 for a complete explanation.

Selected Social Science Course	3 credits
Selected Behavioral Science Course	3 credits
Selected Communications Course	3 credits

**May substitute with a different Math course.*

energy technology

global energy

Creating and maintaining the means to produce economical energy has become a global business that will not close its doors because of lack of demand for the product. In fact, that demand is so large that it has created opportunities for newly developed careers in the energy industry and adding additional numbers to the current industry employee base. The Energy Technology program is designed to meet the ever-increasing need in the particular area of maintenance and repair technicians for energy producing industries.

earth, wind and fire . . .

Coal-fired and wind generation energy is rapidly expanding in this region. The ethanol industry's production capabilities are exploding across the Midwest. The agricultural by-product industry holds much promise for future uses in creating energy. And, the current pipelines used to transport petroleum products are in need of maintenance. All of these facilities are facing an acute need for technicians who can maintain and repair the production equipment for the energy industry.

utilizing what we have

The Energy Technology program will have two major components: technical theoretical training and practical experience gained in the labs and during the internship. The Energy Technology program will utilize content from several of Lake Area Tech's existing programs such as machine tool technology, aviation maintenance technology, welding and electronic systems technology. In addition, courses specific to the energy industry also will be taught. Students will learn mechanical maintenance, repair and overhaul. They will also learn alignment techniques, metallurgy, pneumatics, hydraulics, thermodynamics, combustion, vibration analysis and dynamic balancing. Environmental concerns will also be taught throughout the program.

the future

The growth of the energy industry in this area of the country is substantial. The need for Energy Technicians in this career field is solid both locally and nationally. A skilled energy technician can earn high wages in ethanol plants, power plants, wind turbine farms, pipelines, dairy and cheese processing plants, and any industry that requires an employee to understand processes and perform industrial maintenance. These individuals can also be employed as millwrights.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Math, Algebra, Physics, Computer, Communication Skills, Industrial Technology courses.

20 months

credits required for graduation: 75.5
associate of applied science (a.a.s.) degree

energy technology courses

ENE 100	Fundamentals of Energy Production and Distribution	2 credits
ENE 105	OSHA/Safety . . . . .	.5 credit
ENE 110	Machine Tool Theory and Precision Measuring	1 credit
ENE 115	Machine Tool Lab	2 credits
ENE 120	Turbine Theory and Maintenance	6 credits
ENE 125	Interpreting Mechanical Drawings	1.5 credits
ENE 130	Process Boilers	2 credits
ENE 135	Powerplant Fundamental/Equipment	2 credits
ENE 140	Pipe and Stainless Steel Welding	2 credits
ENE 145	Rotating Equipment Basics	2 credits
ENE 150	Basic Valves	1 credit
ENE 155	Basic Pipe Fitting	2 credits
ENE 160	Manlifts and Forklifts Operation	1 credit
ENE 165	Internship (300 hours)	5 credits
ENE 200	Wind and Nuclear Energy Fundamentals	1 credit
ENE 205	Plant Operation and Troubleshooting	3 credits
ENE 210	Ethanol Biofuels Production	3 credits
ENE 215	Industrial Electrical Wiring	2 credits
ENE 220	Hydraulics Theory and Maintenance	1 credit
ENE 225	Plant Blueprints and Drawings	1.5 credits
ENE 230	Basic Motor Controls	2 credits
ENE 235	Thermodynamics	3 credits
ENE 240	Instruments and Controls	3 credits
ENE 245	Energy Industry Codes and Regulations	2 credits
ENE 250	Fluid Power and Pneumatics	2 credits
ENE 255	Composites Material and Structures	1 credit
ENE 260	Non-destructive Inspection	1 credit
HAZ 100	Hazardous Materials Safety . . . . .	.5 credit
MATH 117	Applied Trigonometry	1 credit
WLD 230	Structural Material Welding	3 credits

To fulfill graduation requirements, students must select one course in each of the areas listed. See page 75 for a complete explanation.

Selected Mathematics Course	3 credits
Selected Behavioral Science Course	3 credits
Selected Communications Course	3 credits
Selected Social Science Course	3 credits
Selected Computer Course	3 credits

engineering/architectural drafting

turn ideas into reality

The Engineering/Architectural Drafting program trains engineering technicians to skillfully transfer rough sketches and basic ideas into accurate, precise, universally understood drawings. Students will spend equal time studying the basics of architectural drafting, mechanical drafting and civil engineering technology. During the course, students will be trained to calculate the strengths, costs and quantities of materials.

blueprint for success

If you enjoy the idea of surveying, designing and solving problems, then engineering/architectural drafting could be a good career choice. The very latest in state-of-the-art equipment is employed in the Engineering/Architectural Drafting program. Students will be exposed to computer aided drafting, surveying total stations and data collectors, global positioning systems, and related software on computers. It is definitely in the student's best interest to have strong math and communication skills.

employment opportunities

As the country continues to grow, so does the need for engineering technicians. Job opportunities are found in manufacturing, transportation and the construction industry. Further employment opportunities include state and federal agencies, architectural and consulting firms, public utilities, highway departments and the military. Graduates of the Engineering/Architectural Drafting program enter a field which provides challenges and offers continued advancement potential.

who can be a drafting professional?

Engineering/Drafting individuals represent their employer positively through professionalism in dress, work habits and contacts with customers. They need to deal with stress effectively, communicate clearly, and maintain positive relationships with co-workers, management and customers.

Students entering the program are also expected to have a strong background in Math, English and Computer Literacy.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Basic Drafting, Algebra, Geometry, Trigonometry, Communications, Math, English and Computer.

18 months

credits required for graduation: 72
associate of applied science (a.a.s.) degree

engineering/architectural drafting courses

AED 100	Automated External Defibrillator . . . . .	.5 credit
CIS 102	Windows Applications for Technicians	3 credits
ENG 103	Mechanical Drafting I Lab	3 credits
ENG 108	Intro to Engineering Drawing Theory	1.5 credits
ENG 109	Architectural Drafting I Theory	2.5 credits
ENG 112	Architectural Drafting I Lab with CAD . . . . .	.5 credits
ENG 143	Computer-Assisted Drafting I	3 credits
ENG 144	Computer-Assisted Drafting II	3 credits
ENG 150	Introduction to Mechanical Theory II	1 credit
ENG 151	Theory of Surveying Practice	2 credits
ENG 153	Mechanical Drafting Lab II	2 credits
ENG 156	Basic Civil Drafting	1 credit
ENG 176	Basic Surveying Procedures	3 credits
ENG 203	Applied Civil Mathematics	2 credits
ENG 215	Concrete Technology	1 credit
ENG 223	Advanced Surveying Procedures	6 credits
ENG 229	Advanced Civil Drafting with CAD	6 credits

COURSES FOR ARCHITECTURAL OPTION*

ENG 245	Architectural Drafting II Theory	3 credits
ENG 260	Architectural Presentation	1.5 credits
ENG 272	Applied CAD II - Architectural	10 credits

COURSES FOR MECHANICAL OPTION*

ENG 250	Engineering Drawing II Theory	3 credits
ENG 261	Mechanical Presentation	1.5 credits
ENG 271	Advanced Mechanical Drawing with CAD**	10 credits

To fulfill graduation requirements, students must select one course in each of the four areas listed. See page 75 for a complete explanation.

Selected Mathematics Course	3 credits
Selected Behavioral Science Course	3 credits
Selected Communications Course	3 credits
Selected Social Science Course	3 credits

*Option sequence and/or availability dependent upon enrollment.

**Selection of course depends on semester.

environmental technology

our future depends on environmental technology

Environmental Technology is vital to our future. Environmental technicians work to ensure that our natural resources are protected and that the chemicals and fuels entering our environment are monitored. Graduates of this program will analyze and test the quality of our surface and ground water, soil, air and fuel.

and there's plenty of variety

Technicians may work inside a lab or out in the field collecting, testing and analyzing natural resources or manufactured products. This is a great career path for a person who cares about the environment, is detail-oriented, excels in science and likes variety in the workplace.

Technician's duties include:

- Making solutions and reagents
- Assisting in environmental management and quality assurance
- Participating in research and development
- Utilizing various instruments, preparing, collecting and analyzing samples
- Assessing data
- Performing microbiologic and molecular testing

a hands-on education

Students in the Environmental Technology program are trained to use the newest testing and monitoring technology available. Students also learn proper sampling and record keeping procedures through hands-on lessons, experiments and projects that take place both in and out of the classroom. Along with classroom and field experience, students in this program have the opportunity to participate in an internship where they receive vital on-the-job training that will further prepare them for the workforce.

employment opportunities

The Bureau of Labor Statistics includes research and testing as one of the top ten professions with the fastest-growing employment opportunities. Students graduating from this program most likely will be able to choose from a number of job opportunities.

Environmental technicians may perform field and lab work for local, state and federal governments dealing with water, soil and indoor and outdoor air quality. Others may perform tests on soil and water quality for agriculture and other research firms. Most recently, graduates of this program have found cutting-edge jobs with alternative fuel plants like ethanol plants, where they test the plant's product to ensure all stages of production are working properly.

Completion of this program also can prepare students for transfer into an environmental management program at a four-year institution.

recommended background courses

Although not required, the following courses would be beneficial to this program prior to attending Lake Area Technical Institute: Science, Chemistry, Algebra, Biology, Computer and English.

11 months – credits required for graduation: 40.5

20 months – optional associate of applied science (a.a.s.) degree

credits required for graduation: 73

environmental technology courses

AC 100	Applied Communications . . . . .	.5 credit
AED 100	Automated External Defibrillator . . . . .	.5 credit
CHEM 106	Inorganic Chemistry Lecture	3 credits
CHEM 107	Inorganic Chemistry Lab	1 credit
CHEM 108	Organic Chemistry Lecture	3 credits
CHEM 109	Organic Chemistry Lab	1 credit
CIS 102	Windows Applications for Technicians	3 credits
ENV 100	Water Quality	3 credits
ENV 102	Introduction to Environmental Technology	2 credits
ENV 105	Instrumentation	1 credit
ENV 110	Soil Science	3 credits
ENV 112	Current Issues in Environmental Technology I	1 credit
ENV 115	Environmental Sampling and Monitoring	3 credits
ENV 120	Internship I	5 credits
ENV 220	Water and Wastewater Technology	3 credits
HAZ 100	Hazardous Materials Safety . . . . .	.5 credit
MATH 100	Applied General Math	3 credits
MICR 231	General Microbiology	4 credits

ADDITIONAL COURSES REQUIRED FOR A.A.S. DEGREE:

ENV 203	Ecology	3 credits
ENV 206	Botany	4 credits
ENV 207	Permits and Grant Writing	1 credit
ENV 209	Statistics	1 credit
ENV 210	Environmental Analysis	3 credits
ENV 230	Internship II	5.5 credits
ENV 235	Hazardous Materials Compliance	2 credits
ENV 240	Capstone Project	Credit assigned

To fulfill graduation requirements, students must select one social science course. See page 75 for a complete explanation.

Selected Social Science Course	3 credits
Selected Behavioral Science Course	3 credits
Selected Communications Course	3 credits
Selected Mathematics Course	3 credits

financial services

why financial services?

Financial Services is one of the most exciting and diverse fields of the business sector. Students in this program are preparing for careers in accounting, banking, insurance, investing, real estate and a number of other financial fields. If you want to put yourself “where the money is” and enjoy working with people or numbers, then Financial Services is where you want to be!

choosing an option

There are three options to choose from in Financial Services: *Agri-Financial Services*, *Business Accounting* and *Consumer Financial Services*.

Students in the Financial Services program are encouraged to join campus organizations such as PASO and SkillsUSA-VICA. These are great organizations that provide leadership to the student and also look good on the resume!

One of the most important aspects of the program is the internship. Students take part-time or summer jobs in their field of study and earn credit for it. In this way, students get a first hand look at the career they have chosen and also gain valuable experience that will help them obtain a full-time job. The instructors will assist the student in finding an internship site, but the student must interview and “win” the job. This again gives the student valuable future experience.

adding it all up

Whether you want to be a bookkeeper, a bank loan officer or something in between, Financial Services is for you. If you are good with numbers and want to help people, then you will enjoy this program.

recommended background courses

To be fully prepared for this program the student should have strong math and computer skills. Classes that are helpful would be: Accounting, Algebra, Computers, Business Law and any other Business courses.

20 months

credits required for graduation –

consumer financial services option: 75

business accounting option: 75

agri-financial services option: 75

associate of applied science (a.a.s.) degree

financial services courses

AC 100	Applied Communications . . . . .	.5 credit
ACCT 210	Principles of Accounting I	3 credits
ACCT 211	Principles of Accounting II	3 credits
ACCT 218	Tax Accounting I	3 credits
ACCT 220	Computer and Accounting Applications I	3 credits
ACCT 224	Financial Statement Analysis	3 credits
AED 100	Automated External Defibrillator . . . . .	.5 credit
BUS 103	Management Seminars I . . . . .	.5 credit
BUS 106	Management Seminars II . . . . .	.5 credit
BUS 120	Principles of Marketing	3 credits OR
BUS 160	Principles of Selling	3 credits
BUS 220	Personal Finance	3 credits
BUS 236	Financial Management	3 credits
BUS 239	Management Seminars III . . . . .	.5 credit
BUS 242	Management Seminars IV . . . . .	.5 credit
BUS 246	Internship A	3 credits
BUS 247	Internship B (or elective for 3 credits)	3 credits
CIS 105	Microcomputer Software Applications	3 credits
CIS 125	Advanced Microcomputer Applications	3 credits
ECON 201	Principles of Microeconomics	3 credits
ECON 202	Principles of Macroeconomics	3 credits
ENGL 101	Composition	3 credits
MATH 101	Intermediate Algebra	3 credits
PSYC 101	General Psychology	3 credits OR
PSYC 100	Psychology of Human Relations	3 credits
SPCM 101	Fundamentals of Speech	3 credits

CONSUMER FINANCIAL SERVICES OPTION

BUS 140	Business Law	3 credits
BUS 200	Principles of Banking	3 credits
BUS 209	Principles of Insurance	3 credits
BUS 212	Principles of Finance	3 credits
BUS 219	Fundamentals of Lending I	3 credits
BUS 222	Fundamentals of Lending II	3 credits

BUSINESS ACCOUNTING OPTION

ACCT 230	Principles of Accounting III	3 credits
ACCT 233	Principles of Accounting IV	3 credits
ACCT 214	Cost Accounting	3 credits
ACCT 222	Payroll Accounting	3 credits
ACCT 237	Applied Federal Income Tax	3 credits
BUS 140	Business Law	3 credits

AGRI-FINANCIAL SERVICES OPTION

AGR 104	Commodity Merchandising	2 credits
BUS 200	Principles of Banking	3 credits
BUS 212	Principles of Finance	3 credits
BUS 219	Fundamentals of Lending I	3 credits
BUS 222	Fundamentals of Lending II	3 credits
Ag Electives	. . . . .	4 credits

human services technician

a career that touches lives

Imagine a career where you can truly make a difference in the life of individuals young and old who rely on the help of others. The Human Services Technician program will prepare graduates for employment in various types of human services environments, including adjustment development/adjustment training centers, group homes, nursing homes and daycare centers.

an unyielding patience . . .

is needed in this particular career. Because the clients may be developmentally disabled, terminally ill, an accident victim or children, the students in this program need the ability to relate to many different individuals. Human services employees are on their feet most of the time, so a high energy level is important.

providing a helping hand

The Human Services career means that every day you will experience the satisfaction and fulfillment that comes from providing care to those who need a helping hand. Based on their interests, students entering this program choose to focus their studies on a particular community of people in need.

Human Services Technician students choose among one of the following options:

Activity Technicians/Mental Health providers may work in nursing homes, group homes or assisted living facilities. They organize and implement group or individual activities to promote optimal physical and intellectual health.

Child Development personnel will work or manage such facilities as daycares or preschools. These graduates will provide the daily care of infants, toddlers and preschool-age children.

Developmental Disabilities graduates will work in developmental/adjustment training centers or group homes. In these settings, they will assist clients with daily functions, activities, and social interaction.

Youth Offender is for those in the developmental disabilities program who wish to focus their second year of study and training toward the challenging and rewarding area of youth offenders. Graduates will work in the fields of court services, probation or other programs that serve the needs of youth placed out of their homes or communities due to behavioral concerns.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Psychology, Sociology, Communications, Health and English.

9 months – credits required for graduation

mental health/activity technician: 36

developmental disabilities: 36

child development: 36

18 months – credits required for graduation

optional associate of applied science (a.a.s.) degree: 72

youth offender with associate of applied science (a.a.s.) degree: 72

COURSES FOR MENTAL HEALTH/ACTIVITY TECHNICIAN, DEVELOPMENTAL DISABILITIES, AND YOUTH OFFENDER WITH A.A.S. DEGREE

HST 101	Orientation to Human Services.	1 credit
HST 119	Group Techniques.	1 credit
HST 122	Service Learning. . . . .	.5 credit
HST 126	Service Learning. . . . .	.5 credit
HST 127	Personal Care Assistant (Nutritional Diets)	2 credits
HST 132	Sexual Offending and People with Disabilities	2 credits
HST 136	Medication Administration Unauthorized Personnel . . . . .	.5 credit
HST 137	Families	2 credits
HST 138	Mental Health Seminar	1 credit
HST 139	Death and Dying.	1 credit
HST 143	Developmental Disabilities.	2 credits
HST 146	Disabilities Seminar	1 credit
HST 149	Behavior Habilitation Training	3 credits
HST 159	Minority Studies.	2 credits
HST 160	Clinical Experience.	2 credits
HST 164	Program Planning.	2 credits
HST 165	Selected Topics in Abnormal Psychology	1 credit
HST 189	On-the-Job Training III	3 credits OR
HST 143	Development Disabilities.	2 credits
HST 201	OJT in the Developmental Disabilities Setting	2.5 credits
HST 203	OJT in the Mental Health Setting	2.5 credits
AC 100	Applied Communications	1 credit
AED 100	Automated External Defibrillator. . . . .	.5 credit
CIS 102	Windows Applications for Technicians	3 credits
HAZ 100	Hazardous Materials Safety . . . . .	.5 credit
MA 115	Medical Terminology	1.5 credits
OTA 160	Beginning Sign Language	1 credit
PSYC 101	General Psychology	3 credits

COURSES FOR CHILD DEVELOPMENT

HST 101	Orientation to Human Services.	1 credit
HST 108	Guiding Children's Behavior	2 credits
HST 114	Literature, Creativity, and Imagination	3 credits
HST 116	Educare of Infants and Toddlers.	2 credits
HST 125	On-The-Job Training I	2.5 credits
HST 129	Lesson Planning and the Early Child Curriculum	4 credits
HST 131	Health, Safety, and Nutrition I.	3.5 credits
HST 134	Child Growth and Development.	3 credits
HST 137	Families	2 credits
HST 141	Children with Special Needs	1.5 credits
HST 156	On-The-Job Training II	3 credits
AC 100	Applied Communications	1 credit
AED 100	Automated External Defibrillator . . . . .	.5 credit
CIS 102	Windows Applications for Technicians	3 credits
HAZ 100	Hazardous Materials Safety . . . . .	.5 credit
PSYC 100	Psychology of Human Relations	3 credits

ADDITIONAL COURSES FOR ASSOCIATE OF APPLIED SCIENCE DEGREE

HST 173	Special Topics in Human Services.	1 credit
HST 177	Ethics and Issues in Human Services	2 credits
HST 188	Chemical Dependency	3 credits
BUS 170	Human Resource Management	3 credits
BUS 220	Personal Finance	3 credits
ENGL 101	Composition	3 credits
MATH 100	Applied General Math.	3 credits
SOC 100	Introduction to Sociology.	3 credits
SPCM 101	Fundamentals of Speech	3 credits

ADDITIONAL COURSES FOR ASSOCIATE OF APPLIED SCIENCE DEGREE – CHILD DEVELOPMENT

BUS 152	Desktop Publishing	3 credits
Business Electives	. . . . .	6 credits

ADDITIONAL COURSES FOR ASSOCIATE OF APPLIED SCIENCE DEGREE – MENTAL HEALTH/ACTIVITY TECHNICIAN, DEVELOPMENTAL DISABILITIES AND YOUTH OFFENDER

HST 176	Casework Skills and Resources	3 credits
HST 179	Introduction to Criminal Justice	3 credits
HST 183	Juvenile Delinquency.	3 credits
PSYC 251	Abnormal Psychology	3 credits

machine tool technology

machinists are highly skilled

A machinist is involved in the production of nearly every product that is manufactured. Qualified machine tool technicians are needed to program, set up, operate and supervise precision machine tools. Machine tool graduates also can become tool-makers who produce various jigs, fixtures, punches and dies, molds or other specialized tooling and machines.

exposed to the latest technology

Lake Area Technical Institute has made a heavy investment in the latest technology to prepare graduates for employment in the world of high-tech manufacturing. The equipment includes 23 computer controlled machines such as vertical milling machines, vertical machining centers, CNC lathes, CNC wire and sinker EDM's and various CAD/CAM software packages. Graduates receive training on 11 different types of machine controllers. Field trips are arranged during a student's training to visit companies using computerized numerical controlled machines and plants employing toolmakers and moldmakers.

physical strength not necessary

Students in this program need good eyesight, excellent eye-hand coordination, a high level of mechanical aptitude, imagination, math skills, computer skills, and the ability to work alone or as part of a team. Physical strength and size are not required. A machinist must be capable of reading and interpreting blueprints, which have the specifications necessary for the manufacture of specified parts. In addition, a machinist must be able to perform the necessary operations in the correct order to produce the specified product accurately and quickly. Much of the newer equipment is programmed by computer so a modern machinist needs computer skills.

training overview

The training introduces the student to blueprint reading, machine trades math, precision measuring, and shop safety. The training advances to cutting tool geometry, manual milling, and manual turning. The student will machine several projects to develop skills utilizing the various machining techniques. In the second year, CNC concepts are expanded while the student learns how to produce fixtures, punches and dies, and molds.

employment possibilities

South Dakota, as well as the entire nation, has an unmet need for trained machinists. There are machinists employed in virtually every town. Machinists work in welding shops, maintenance departments for companies, cities, etc. Others work as CNC programmers and toolmakers. Graduates of the Machine Tool Technology program will find employment as machine set-up personnel, maintenance technicians, general machinists, apprentice tool-and-die-makers, apprentice moldmakers and CNC operators/programmers.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Applied Math, Geometry and Communications.

18 months

credits required for graduation: 72
associate of applied science (a.a.s.) degree

machine tool technology courses

AED 100	Automated External Defibrillator . . . . .	.5 credit
CIS 102	Windows Applications for Technicians	3 credits
MATH 117	Applied Trigonometry	1 credit
MTT 101	Machine Tool Theory I	1 credit
MTT 106	Blueprint Reading	1 credit
MTT 110	Precision Measuring	1 credit
MTT 118	Turning/Milling Theory	1 credit
MTT 129	Lathe and Mill Operations	5.5 credits
MTT 134	Machine Tool Lab	1 credit
MTT 152	Advanced Lathe and Mill Theory	1 credit
MTT 158	Advanced Lathe and Mill Operations	5 credits
MTT 167	Introduction to Computer Numerical Controls (CNC)	1 credit
MTT 168	Precision Grinding	2 credits
MTT 172	EMCO Computer Numerical Control (CNC) Turning Center Operations	3 credits
MTT 185	Milltronics Computer Numerical Control (CNC) Machining Center	3 credits
MTT 207	Advanced Computer Numerical Control (CNC) Theory	2 credits
MTT 208	Advanced Computer Numerical Control (CNC) Operations	3 credits
MTT 212	CAD/CAM	1 credit
MTT 217	Electrical Discharge Machines Operations	1 credit
MTT 218	Advanced Electrical Discharge Machines Operations	1 credit
MTT 221	Fixture-Making Theory	1 credit
MTT 222	Fixture-Making Applications	2 credits
MTT 226	Die-Making Theory	1 credit
MTT 227	Die-Making Lab	4 credits
MTT 236	Coordinate Measuring Machine	1 credit
MTT 261	Basic Molding Processes	1 credit
MTT 267	Basic Molding Operations	4 credits
MTT 272	Cincinnati Milacron Computer Numerical Control (CNC) Theory	1 credit
MTT 274	Cincinnati Milacron Computer Numerical Control (CNC) Operations	4 credits
MTT 277	Project	3 credits

To fulfill graduation requirements, students must select one course in each of the four areas listed. See page 75 for a complete explanation.

Selected Behavioral Science Course	3 credits
Selected Mathematics Course	3 credits
Selected Social Science Course	3 credits
Selected Communications Course	3 credits

marketing/management/ sales

From the department store salesperson to the individual who designs newspaper advertising . . . we need marketing/management/sales people.

Marketing/management/sales is a dynamic career. It's for those who enjoy working in the exciting world of business. In this program students are prepared for a wide variety of career choices.

Marketing/Management/Sales graduates play a vital role in our nation's overall economy and help keep America's business wheels spinning.

and there's plenty of variety

The Marketing/Management/Sales program at Lake Area Tech provides theory and practical experience for the student. The program emphasizes the fundamentals of marketing and the profitable operation of a business enterprise. Its core requirements are suitable for use in any business where a basic understanding of marketing, management and professional sales is required.

Special attention is given to the role of the middleman, evaluation of customer needs, price determination, promotion, sales strategy, government regulations and the importance of the customer.

who can build a career in marketing/management/sales?

Someone interested in Marketing/Management/Sales should have an outgoing personality, be enthusiastic and enjoy working with people.

job opportunities

Marketing/Management/Sales is recognized as one of the fastest growing career areas in the future. Students entering the work force will find a wide variety of employment opportunities with a number of different organizations. Many of the job openings fall within the vast wholesale and retail sectors, retailing, advertising, small business management and accounting.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Communications, Business Courses, Business Law, Accounting, Marketing Education, Math, Psychology, Computer, English.

20 months

credits required for graduation: 76
associate of applied science (a.a.s.) degree

marketing/management/sales courses

AC 100	Applied Communications . . . . .	.5 credit
ACCT 210	Principles of Accounting I	3 credits
*ACCT 211	Principles of Accounting II	3 credits OR
*BUS 236	Financial Management	3 credits
AED 100	Automated External Defibrillator . . . . .	.5 credit
BUS 101	Intro to Business	3 credits
BUS 120	Principles of Marketing	3 credits
BUS 122	Marketing Research	3 credits
BUS 140	Business Law	3 credits
BUS 150	Advertising	4 credits
BUS 152	Desktop Publishing	3 credits
BUS 160	Principles of Selling	3 credits
BUS 162	Retailing	3 credits
BUS 170	Human Resources Management	3 credits
**BUS 210	Entrepreneurship	3 credits
BUS 215	Business Ethics	3 credits
BUS 220	Personal Finance	3 credits
BUS 230	Management Policy	3 credits
BUS 231	Management Seminars	2 credits
BUS 235	Business Internship	6 credits OR
BUS 240	Business Internship and Elective	6 credits
CIS 105	Microcomputer Software Applications	3 credits
CIS 125	Advanced Microcomputer Applications	3 credits OR
BUS 185	E-Business	3 credits
ECON 201	Principles of Microeconomics	3 credits
ENGL 101	Composition	3 credits
MATH 100	Applied General Math	3 credits OR
MATH 101	Intermediate Algebra	3 credits
PSYC 101	General Psychology	3 credits OR
PSYC 100	Psychology of Human Relations	3 credits
SPCM 101	Fundamentals of Speech	3 credits

*Prerequisite: Student must have successfully completed Accounting I and have a good understanding of balance sheets, income statements and cash flow statements (or have the approval of the instructor) before taking this course.

**Prerequisite: Students must have successfully completed Accounting I and Accounting II or Financial Management (or have the approval of the instructor) before enrolling in this course.

med/fire rescue services

called to serve

Peoples' lives can change in an instant when there is physical injury inflicted or an out of control fire imposing danger or damage. The Med/Fire Rescue Services program is designed for the individual with a strong desire to help people in these life-threatening situations. The lives of individuals often depend on the quick reaction and competent care of emergency medical technicians, paramedics and fire fighters. Individuals who feel the call to serve mankind find this career a rewarding experience.

this is no ordinary job

Every day is an adventure in a Med/Fire Rescue Services career. Med/Fire Rescue Services responsibilities include controlling and extinguishing fires, protecting life and property and administering emergency and lifesaving services. Med/Fire Rescue Service Technician responsibilities include controlling and extinguishing fires, assisting with lifesaving medical treatment, both on the scene and during transportation, and delivery to hospitals, assisting in the recovery from disasters, providing aircraft fire rescue and playing an important role in the control and clean-up of spills and hazardous chemical incidents.

high demand

According to the United States Bureau of Labor Statistics, the regional and national trends show a significant increase over the next ten years in career opportunities in the Med/Fire Rescue Services profession. Although many small med/fire rescue departments are volunteer positions, the larger areas and cities employ hundreds to thousands of technicians. More recently, these departments significantly expanded the duties performed by the Med/Fire Rescue Services personnel resulting in an increase of hiring qualified employees.

quick thinking . . .

is essential in the Med/Fire Rescue Services field. Individuals employed in this area usually respond to a 911 call and need to react quickly. These individuals deal with people in vulnerable situations and need a strong understanding of human nature. Med/Fire Rescue Service Technicians are compassionate, understanding, level-headed and team players. The profession requires good coordination, strength, physical stamina and agility.

recommended background courses

Although not required, the following courses are beneficial to this course of study prior to attending Lake Area Technical Institute: Science, Biology, Anatomy, Psychology, English.

20 months

credits required for graduation: 71.5
associate of applied science (a.a.s.) degree

med/fire rescue services courses

EMT 100	Emergency Medical Technician (EMT Basic)	5 credits
ANAT 142	Anatomy	3 credits
CSC 100	Microcomputer Concepts.	1 credit
HAZ 100	Hazardous Materials Safety . . . . .	.5 credit
PN 110	Medical Terminology. . . . .	.5 credit
PN 130	Pharmacology	1 credit
MFR 100	Paramedic Preparation	1.5 credits
MFR 105	Airway/IV Management	3 credits
MFR 110	Trauma Assessment and Treatment	3 credits
MFR 115	Special Care.	3 credits
MFR 120	Clinical Observation I	1 credit
PHGY 210	Human Physiology.	4 credits
MFR 125	Medical Assessment and Treatment	4 credits
MFR 130	Clinical Observation II	5 credits
MFR 200	Med/Fire Rescue.	1 credit
MFR 205	Firefighter I	5 credits
MFR 210	Hazardous Materials Awareness and Compliance	3 credits
MFR 215	Clinical Observation III	4 credits
MFR 220	Firefighter II	5 credits
MFR 225	Airport Rescue Firefighting	3 credits

To fulfill graduation requirements, students must select one course in each of the four areas listed. See page 75 for a complete explanation.

Selected Behavioral Science Course	3 credits
Selected Mathematics Course.	3 credits
Selected Social Science Course	3 credits
Selected Communications Course	3 credits

**The Med/Fire Rescue Services program is a new program beginning fall of 2008. All course content is subject to change.*

medical assisting

medical assistants are multi-skilled allied health professionals

Medical assisting is a multi-skilled allied health profession whose practitioners work primarily in ambulatory settings such as medical offices and clinics. Medical assistants function as members of the health care delivery team and perform administrative and clinical procedures.

and there's plenty of variety

The Medical Assisting program at Lake Area Technical Institute is competency-based, individualized and designed to prepare students for a career in medical assisting. The administrative duties of a medical assistant are to receive patients in a professional and friendly manner, to perform numerous office duties and public relations functions and sometimes to administer first aid. The clinical responsibilities of a medical assistant include a variety of duties such as helping patients prepare for examinations, assisting the doctor, cleaning and sterilizing instruments and equipment and assisting in emergency situations.

who can be a medical assistant?

Anyone who has a genuine concern for the welfare, comfort and happiness of others can be a medical assistant. Employers also stress the need for dependability, common sense, emotional stability, a cheerful disposition and willingness to assume responsibility. Medical assistants are part of the medical team. They need to be aware of the ethics and special requirements in this profession.

job opportunities

Medical assistants comprise the largest of all the allied health occupations. Virtually every practicing physician employs one to three medical assistants. Medical assistants are employed in hospitals, public health work, laboratories, medical schools, insurance companies, research institutions, voluntary health agencies and other allied health facilities. There also are opportunities for work with such federal agencies as the Veterans Administration, the U.S. Health Service or armed forces clinics or hospitals. Students completing the program are eligible to take a national certifying examination.

accreditation

The Medical Assisting program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) on the recommendation of the Committee on Accreditation for Medical Assistant Education. AAMA American Association of Medical Assistants, 1361 Park Street, Clearwater, FL 33756, 727-210-2350.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Health, Communications, Math, Science, Computer, Office Practice, Accounting, English, Psychology.

14 months – credits required for graduation: 54

**18 months – optional associate of applied science (a.a.s.) degree
credits required for graduation: 67.5**

medical assisting courses

AC 100	Applied Communications	1 credit
ACCT 210	Principles of Accounting I	3 credits
AED 100	Automated External Defibrillator . . . . .	.5 credit
CIS 105	Microcomputer Software Applications	3 credits
HAZ 100	Hazardous Materials Safety . . . . .	.5 credit
MA 100	Human Anatomy and Physiology	2 credits
MA 105	Intro to Medical Assisting I	2 credits
MA 115	Medical Terminology	1.5 credits
MA 121	Keyboarding I	1 credit
MA 125	Medical Law and Ethics	1.5 credits
MA 130	Understanding Human Behavior/ Human Growth and Development.	1.5 credits
MA 146	Keyboarding II	2 credits
MA 150	Intro to Medical Assisting II	2 credits
MA 152	Medical Office Practice	1 credit
MA 155	Medical Office Transcription I	2.5 credits
MA 160	Pathology.	2 credits
MA 165	Pharmacology	2 credits
MA 167	Medical Coding.	2 credits
MA 171	Medical Laboratory Procedures	2.5 credits
MA 175	Clinical Office Procedures.	2 credits
MA 200	Medical Office Transcription II	2 credits
MA 205	Clinical Office Procedures.	2 credits
MA 211	Computerized Medical Office Procedures I	1.5 credits
MA 212	Patient-to-Payment/Insurance Procedures	1.5 credits
MA 215	Administration of Medications	1 credit
MA 220	Diagnostic and Therapeutic Procedures	1.5 credits
MA 221	Keyboarding III	2 credits
MA 230	Computerized Medical Office Procedures II	2 credits
MA 240	Administrative and Clinical Externship.	4 credits
MLT 135	Principles of Phlebotomy.	1 credit

ADDITIONAL COURSES FOR A.A.S. DEGREE*

ENGL 101	Composition	3 credits
MATH 100	Applied General Math.	3 credits
PSYC 101	General Psychology.	3 credits
SOC 100	Introduction to Sociology	3 credits
SPCM 101	Fundamentals of Speech	3 credits

*Students in the A.A.S. option are not required to take MA 130.

medical laboratory technician

medical laboratory technicians have a strong desire to help others

If you are a problem solver who enjoys challenge and responsibility, the career of Medical Laboratory Technology is for you. Medical laboratory technicians are accurate, reliable, and function well under pressure. Technicians must work quickly and carefully to uncover clues in blood and other specimens that indicate health concerns such as diseases and infections. They may hold life and death in their hands because information they provide can influence the type of treatment a patient receives.

and there's plenty of variety

The Medical Laboratory Technician program at Lake Area Technical Institute trains students for a high caliber and demanding profession. Medical laboratory technicians are primarily concerned with the patient's treatment by performing laboratory procedures in microbiology, blood banking, chemistry, hematology, parasitology, serology and urinalysis.

Specific tasks a medical laboratory technician may perform include collecting, grouping and typing blood; preparing, staining and evaluating blood slides; performing clinical analysis and cell counts on blood; plating cultures; and obtaining electrocardiograms.

This program is made possible through the affiliation of Lake Area Technical Institute with clinical training sites including Prairie Lakes Healthcare System (Watertown, SD), St. Bernard's Hospital (Milbank, SD), Veteran's Administration Hospital (Ft. Meade, SD), Veteran's Administration Hospital (Hot Springs, SD), Central Plains Clinic (Sioux Falls, SD), Granite Falls Municipal Hospital (Granite Falls, MN), Regional Medical Center (Huron, SD), McKennan Hospital and Sanford Hospital (Sioux Falls, SD), Brookings Hospital (Brookings, SD) and the cooperation of their medical laboratory staffs.

is the medical laboratory technician field for you?

Manual dexterity, good eyesight and self-discipline are musts for this occupation. The varied testing procedures require a skilled and conscientious person.

Although they spend less time with patients than doctors and other allied health care professionals, medical laboratory technicians play a vital role in patient care. As an important member of the health care team, the medical laboratory technician works closely with the pathologist and other physicians. The test results they provide help to diagnose disease and allow for the appropriate selection of treatment required for each patient.

job opportunities

Hospitals need competent laboratory personnel and medical laboratory technicians to help meet increased demands for laboratory service in nearly every city, town and rural area. Approximately two-thirds work in hospital laboratories. Others are employed in physician offices, clinics, commercial firms, research facilities, the armed forces, public health centers, industrial and pharmaceutical laboratories and in veterinary clinics.

Students completing the program are eligible to take a national certification exam. The Lake Area Tech Medical Laboratory Technician program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 W. Bryn Mawr Ave., Suite 670, Chicago, IL 60631, 773-714-8880.

20 months

credits required for graduation: 73.5
associate of applied science (a.a.s.) degree

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Health, Science, Algebra, Chemistry, Biology, English, Communications, Math, Computer.

medical laboratory technician courses

AED 100	Automated External Defibrillator . . . . .	.5 credit
ANAT 142	Anatomy.	3 credits
CHEM 106	Inorganic Chemistry Lecture	3 credits
CHEM 107	Inorganic Chemistry Lab	1 credit
CIS 105	Microcomputer Software Applications.	3 credits
ENGL 101	Composition.	3 credits
HAZ 100	Hazardous Materials Safety. . . . .	.5 credit
MA 115	Medical Terminology.	1.5 credits
MATH 101	Intermediate Algebra.	3 credits OR
MATH 102	College Algebra	3 credits
MICR 231	General Microbiology	4 credits
MLT 101	Introduction to Medical Laboratory.	2 credits
MLT 105	Urinalysis and Body Fluids	3 credits
MLT 115	Hematology	4 credits
MLT 117	Molecular Biology	2 credits
MLT 125	Seminar	1 credit
MLT 135	Principles of Phlebotomy.	1 credit
MLT 201	Immunology.	3 credits
MLT 205	Applied Phlebotomy	1 credit
MLT 210	Microbiology, Parasitology, Mycology	4 credits
MLT 215	Clinical Chemistry	4 credits
MLT 221	Immunohematology (Blood Banking).	4 credits
MLT 225	Phlebotomy Practicum . . . . .	.5 credit
MLT 226	Practicum I: General Lab Practice, Phlebotomy, Hematology, Chemistry, Urinalysis (12 weeks)	8 credits
MLT 231	Practicum II: Microbiology, Immunology, Immunohematology (6 weeks).	4 credits
MLT 236	Clinical Correlation (1 week).	1 credit
PSYC 101	General Psychology.	3 credits
SOC 100	Introduction to Sociology	3 credits OR
ECON 201	Principles of Economics I (Micro).	3 credits
SPCM 101	Fundamentals of Speech	3 credits

OPTIONAL COURSES FOR MEDICAL LABORATORY TECHNICIAN STUDENTS

MLT 150	Web-based Case Study	1 credit
MLT 290	Independent Study . . . . .	.5 credit
MLT 295	Case Study.	1 credit

Get your Medical Laboratory Technician degree online.
For more information, go to www.lakeareatech.edu

1 + 1 nursing

is nursing for you?

Those who want to pursue a career in nursing should have a sincere desire to help people and must be sympathetic to the needs of others. Nurses need to be able to accept responsibility and direct or supervise the activity of others. They must have initiative, good judgment and be able to respond appropriately to critical situations.

Nursing is a rewarding and challenging profession. It's a career that involves caring, compassion, specialized knowledge and skill.

deadline to apply for fall semester 2008

Application and CNET – December 14, 2007 for fall 2008 classes. Transcripts and application fee – December 28, 2007, 12:00 noon.

1 + 1 program

Lake Area Technical Institute and the University of South Dakota have cooperated to offer a 1 + 1 Nursing program. This program offers a choice of becoming a Licensed Practical Nurse (LPN) and/or a Registered Nurse (RN). During a student's first year, she/he acquires the skills to be a practical nurse. The student may choose to exit the program after eleven months or apply for admission to the USD Associate Degree Nursing program for the second year.

Individuals who already have earned LPN licensure may apply for admission into the second year. Prerequisites for second-year students are Anatomy, Algebra, Psychology and Freshman Composition. The completion of four credits of college chemistry is highly encouraged.

The Nursing program at Lake Area Technical Institute provides theory and practical experience in the care of obstetrical, pediatric, medical, psychiatric, surgical and geriatric patients.

job opportunities

Employment of nurses is expected to increase much faster than average for all occupations in response to the health care needs of a growing and aging population.

Nursing education offers employment opportunities in hospitals, long-term care facilities, clinics, assisted living facilities and community health locations. In addition, nurses are becoming increasingly involved in patient home care.

Graduates of the 1 + 1 program are eligible to write the National Licensure Exam to earn the title of LPN and/or RN.

accreditation

The Practical Nursing program is accredited by the National League for Nursing Accrediting Commission located at: 61 Broadway, 33rd Floor, New York, New York 10006, 212-363-5555, Ext. 153, Fax 212-812-0390, www.nlnac.org.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Health, Computer, Communications, Science, Chemistry, Biology, English.

practical nursing – 11 months
credits required for graduation: 48.5

associate degree of nursing – 10 additional months
credits required for graduation: 64

1 + 1 nursing courses

AC 100	Applied Communications	1 credit
ANAT 142	Anatomy	3 credits
CSC 100	Microcomputer Concepts	1 credit
AED 100	Automated External Defibrillator . . . . .	.5 credit
ENGL 101	Composition	3 credits
MATH 101	Intermediate Algebra	3 credits OR
*MATH 102	College Algebra (Prerequisite for USD Associate Degree in Nursing)	3 credits
PN 101	Nursing Concepts A	9 credits
PN 105	Nursing Concepts B	2.5 credits
PN 110	Medical Terminology . . . . .	.5 credit
PN 116	Nursing Concepts C	4.5 credits
PN 121	Nursing Concepts D	11.5 credits
PN 130	Pharmacology	1 credit
PN 200	Nursing Clinical	4 credits
PN 205	Responsibilities of the LPN	1 credit
PSYC 101	General Psychology	3 credits

ADDITIONAL COURSES REQUIRED FOR THE UNIVERSITY OF SOUTH DAKOTA ASSOCIATE DEGREE IN NURSING

CHEM 106	Inorganic Chemistry Lecture	3 credits
CHEM 107	Inorganic Chemistry Lab	1 credit
ENGL 210	Introduction to Literature	3 credits (or 3 credits of Humanities or Fine Arts)
LPN-GAP	Exam (credit by verification)	12 credits
MICR 231	General Microbiology	4 credits
NURS 260	Caring for Persons with Health Promotion and Health Maintenance Needs	9 credits
NURS 281	Caring for Persons Across the Lifespan	4 credits
NURS 283	Coordination of Care	1 credit
NURS 285	Caring for Persons with Restorative/Rehabilitative Needs	9 credits
PHGY 210	Human Physiology	4 credits
SPCM 101	Fundamentals of Speech	3 credits

* MATH 102 - College Algebra required for graduation from the ADN program. 3 credits.

INSTITUTIONAL REQUIREMENTS

All students must achieve satisfactory performance on the Regental Proficiency Examination.

Get your Practical Nursing degree online.

For more information, go to www.lakeareatech.edu

occupational therapy assistant

what is occupational therapy?

Occupational Therapy (OT) involves the use of familiar and/or enjoyable activities to assist individuals in improving physical, cognitive, mental or emotional limitations. OT promotes well being and satisfaction with life by helping clients with injury prevention and with improving performance in living.

what does an occupational therapy assistant do?

An Occupational Therapy Assistant (OTA) is a health care professional who, under the supervision of an Occupational Therapist, assists individuals of all ages in learning to manage physical, cognitive, mental and emotional aspects of living. By implementing safe performance of daily activities (self-care, independent living skills, work, leisure, play and social participation), the OTA is able to use the interests of the individual in treatment to teach injury prevention, improve functional ability and/or adapt equipment or environments to improve success.

This program prepares the student to work in a variety of community and health care settings where Occupational Therapy services are presently available and where the services will be available in the future.

about the program

This program, twenty months in length, consists of lecture, laboratory experience, discussion, demonstration and off-site field-work experiences. Upon completion of the curriculum, the graduate receives an Associate of Applied Science degree.

Graduates of this accredited program are eligible to take the national certification examination for the occupational therapy assistant administered by the National Board of Certification of Occupational Therapy (NBCOT). After successful completion of the exam, the graduate will be a Certified Occupational Therapy Assistant (COTA). Most states also require licensure to practice which is typically based on the results of the NBCOT Certification Exam.

accreditation

Lake Area Technical Institute is accredited by the North Central Association of Colleges and Schools. The OTA program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220, 301-625-2682.

Be advised that students graduating from an unaccredited program are not eligible to take the NBCOT Certification Exam. In addition, a felony conviction may affect an individual's eligibility to sit for the national exam and/or obtain state licensure. LATI is an open admissions technical institute.

job opportunities

Job opportunities in the field of occupational therapy are expected to grow over the next ten years. In the year 2000, the Bureau of Labor Statistics projected that the demand for occupational therapy assistants would grow 33 or more percent over the next ten years due to various factors including the aging of our population and the advances made in the medical industry. They also reported in 2002 that the average pay for an Occupational Therapy Assistant was approximately \$37,530 per year.

application process

Students interested in applying for admission in the fall of each year may begin building an application file at any time. Completed applications are processed as they are received. Contact the admissions assistant with questions regarding the status of your application file as applications are not processed until complete. Class size will be limited to 22 students per year. Applicants should be aware that this is an academically intense curriculum.

recommended background courses

The following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Psychology, Sociology, Communications, Biology, Health, English, Computer.

20 months

credits required for graduation: 80
associate of applied science (a.a.s.) degree

occupational therapy assistant courses

ANAT 142	Anatomy	3 credits
AED 100	Automated External Defibrillator . . . . .	.5 credit
CSC 100	Microcomputer Concepts	1 credit
ENGL 101	Composition	3 credits
MA 115	Medical Terminology	1.5 credits
MATH 100	Applied General Math	3 credits
OTA 100	Introduction to Occupational Therapy	2 credits
OTA 105	Activity Analysis	3 credits
OTA 111	Kinesiology/Neurology for Occupational Therapy Assistants	5 credits
OTA 120	Human Development: Prenatal to Adolescent	2 credits
OTA 125	Occupational Therapy Application I - Pediatric Practice	3 credits
OTA 131	Occupations and Adaptations	4 credits
OTA 133	Documentation for the Occupational Therapy Assistant	1 credit
OTA 135	Dynamics of Interaction	2 credits
OTA 140	Ethics and Issues in Occupational Therapy	2 credits
OTA 145	Psychosocial Practice	3 credits
OTA 150	Fieldwork I-A . . . . .	.5 credit
OTA 155	Fieldwork I-B . . . . .	.5 credit
OTA 200	Human Development: Adult to Death	1 credit
OTA 205	Occupational Therapy Application II - Adult Practice	3 credits
OTA 210	Pathophysiology	3 credits
OTA 220	Physical Disabilities Lecture and Lab	5 credits
OTA 231	Special Topics in Occupational Therapy	1 credit
OTA 236	Fieldwork II-A	5.5 credits
OTA 241	Fieldwork II-B	5.5 credits
PHGY 210	Human Physiology	4 credits
PSYC 101	General Psychology	3 credits
PSYC 251	Abnormal Psychology	3 credits
SOC 100	Introduction to Sociology	3 credits
SPCM 101	Fundamentals of Speech	3 credits

physical therapist assistant

an important part of the health care team

Physical Therapist Assistants (PTA) are skilled health care providers who, under the supervision of a Physical Therapist, assist in the treatment and prevention of physical disabilities, movement dysfunction and pain resulting from injury, disease, disability, or other health-related conditions. PTAs perform a variety of functions as part of the overall health care team for a patient.

and there's plenty of variety

Services performed by a PTA may include preparing patients, preparing treatment areas and equipment, and implementing treatment programs which may include therapeutic exercises, gait training, activities of daily living, therapeutic heat and cold, ultrasound, electric current, ultraviolet, traction and various other treatment procedures.

Physical Therapist Assistants identify architectural barriers and assist in teaching other professionals, patients and families to perform treatment procedures, exercises and functional activities. They recognize the psychosocial effects of illness and injury and know how to interact appropriately with patients and the patients' families.

Upon successful completion of required courses, graduates will be awarded an Associate of Applied Science (A.A.S.) degree and will be eligible to take the national certification exam.

who can be a physical therapist assistant?

A Physical Therapist Assistant should be someone who enjoys working with people and has a sincere interest in helping others. PTAs must be willing to take directions from others, to be part of an overall health care team, and to promote maximum recovery for their patients.

Individuals interested in the PTA program should have a strong academic background in the biological sciences, anatomy and people skills. Potential students should also be physically fit, as the physical demands placed on a physical therapist assistant include moderate to heavy lifting.

job opportunities

As medicine and technology is becoming more advanced and the overall population is growing older and living longer, the need for PTAs will continue to climb over the next decade.

Physical Therapist Assistants can locate jobs in hospitals, long-term care facilities, rehabilitation centers, schools and private practice clinics.

application process

Acceptance into the PTA program is limited to 24 students. Applicants are evaluated based on G.P.A., scholastic aptitude and essay questions. Detailed information regarding the application process can be received by contacting the LATI Admissions Office or following the Application Process link on the LATI website.

accreditation

The Physical Therapist Assistant program at Lake Area Technical Institute is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA).*

*The Commission on Accreditation in Physical Therapy Education
Department of Accreditation

American Physical Therapy Association

1111 North Fairfax Street

Alexandria, VA 22314

Telephone: 703-706-3245

Website: www.apta.org/CAPTE

20 months

credits required for graduation: 80
associate of applied science (a.a.s.) degree

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Health, Communications, Anatomy, Biology, English, Math and Computer.

physical therapist assistant courses

AED 100	Automated External Defibrillator . . . . .	.5 credit
*ANAT 142	Anatomy	3 credits
*CSC 100	Microcomputer Concepts	1 credit
*ENGL 101	Composition	3 credits
MA 115	Medical Terminology	1.5 credits
*MATH 100	Applied General Math	3 credits
*PHGY 210	Human Physiology	4 credits
*PSYC 101	General Psychology	3 credits
PTA 100	Introduction to Physical Therapist Assisting	2 credits
PTA 106	Kinesiology	3 credits
PTA 110	Fundamentals of Physical Therapist Assisting	4 credits
PTA 116	Ethics and Issues in Physical Therapy	2 credits
PTA 120	Observation and Measurement	4 credits
PTA 125	Physical Agents and Massage	4 credits
PTA 136	Electrotherapy	3 credits
PTA 141	Clinical Affiliation I	4 credits
PTA 145	Theories of Therapeutic Exercise	1 credit
PTA 150	Pathology for the PTA	2 credits
PTA 216	Applications in Therapeutic Exercise	2 credits
PTA 220	Musculoskeletal Disorders and Treatment	4 credits
PTA 225	Psychosocial Considerations in Patient Care	2 credits
PTA 228	Neuroanatomy and Neurological Dysfunction	3 credits
PTA 229	Human Development and Pediatric Disorders	1 credit
PTA 231	Special Topics	2 credits
PTA 242	Rehabilitation Procedures	4 credits
PTA 245	Clinical Affiliation II	4 credits
PTA 250	Clinical Affiliation III	4 credits
*SOC 100	Introduction to Sociology	3 credits
*SPCM 101	Fundamentals of Speech	3 credits

* Classes based on college model where 16 credit hours equal one credit. All others based on technical education model where 28 clock hours equal one credit with the exception of clinical affiliation where 60 hours equal one credit.

robotics

automation becomes an integral part of manufacturing

Today, as never before, industry depends on manufacturing technicians to keep automated systems up and running. The rapid development of technology requires highly skilled technicians.

exposed to the latest technology

Lake Area Technical Institute has made a heavy investment in the latest technology to prepare graduates for employment in the world of high-tech manufacturing. The equipment includes multiple programmable logic controllers, several six-axis robots, pick and place systems, pneumatics trainers, part transfer systems, process control trainers, troubleshooting trainers, industrial pumps, mechanical, hydraulics, process control, instrumentation and various components. Field trips are arranged during a student's training to visit companies using automated systems and plants employing electro-mechanical manufacturing equipment maintenance technicians.

physical strength not necessary

Students in this program need good eyesight, excellent eye-hand coordination, a high level of mechanical aptitude, critical thinking skills, imagination, math skills, computer skills, and the ability to work alone or part of a team. Physical strength and size are not required. A technician must be capable of reading, interpreting, programming, and troubleshooting automated systems.

jobs await the trained technician

Employment opportunities include fluid power controls/systems technician, electro-mechanical technician, fluid power systems mechanic, robotics technician, automated systems technician, manufacturing technician, plant engineering technician, and process control technician.

if you enjoy

electronics, computers and problem-solving, you will find that the Robotics program provides you with the opportunity for a challenging and exciting career in the world of automation.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Math, Algebra, Physics, Computer, Communications, English.

18 months

credits required for graduation: 72
associate of applied science (a.a.s.) degree

robotics courses

AED 100	Automated External Defibrillator . . . . .	.5 credit
CIS 102	Windows Applications for Technicians	3 credits
EST 103	Principles of DC Circuits Theory	3 credits
EST 106	Principles of DC Circuits Lab	3 credits
EST 109	Principles of AC Circuits Theory	3 credits
EST 112	Principles of AC Circuits Lab	3 credits
EST 115	Electronic Devices I Theory	3 credits
EST 118	Electronic Devices I Lab	3 credits
EST 121	Digital Theory	3 credits
EST 124	Digital Lab	3 credits
EST 250	Electronic Devices II Theory	2 credits
EST 252	Electronic Devices II Lab	3 credits
EST 267	Rework, Repair and Surface Mount Soldering	1.5 credits
HAZ 100	Hazardous Materials Safety . . . . .	.5 credit
RBTC 200	Blueprint Reading/Solid Modeling	3 credits
RBTC 202	Robotic Engineering	3 credits
RBTC 205	Programmable Logic Controllers	4 credits
RBTC 207	Fluid Power	2 credits
RBTC 210	Mechanical Systems	1.5 credits
RBTC 216	Basic Computer Numerical Control (CNC) Lathe and Mill	1 credit
RBTC 219	Programmable Logic Controllers' Applications	4 credits
RBTC 221	Precision Measuring	1 credit
RBTC 225	Machine Tool Lab	2 credits
RBTC 227	Flexible Manufacturing Systems	2 credits
RBTC 230	Welding Process	2 credits
*MATH 100	Applied General Math	3 credits

To fulfill graduation requirements, students must select one course in each of the three areas listed. See Page 75 for a complete explanation.

Selected Behavioral Science Course 3 credits
Selected Social Science Course 3 credits
Selected Communications Course 3 credits

**May substitute with a different math course.*

welding technology

welding impacts our economy

Welders are needed in nearly every community in the nation and the world. The welding profession is crucial for the success of the metal fabrication industry.

all essential types of welding are taught

The Welding curriculum includes brazing, arc welding, heliarc welding, metal inert gas (Tig and Mig) welding and oxyacetylene welding. Welding students receive practical experience on all types of welding equipment through job and production shop welding. Primary units of instruction include position welding: flat, horizontal, vertical and overhead. The operation of automated welding equipment (robotics) and ultrasonic testing equipment has recently been added to the curriculum. Related welding instruction includes job safety, blueprint reading, sketching, shop mathematics, metallurgy and communication skills.

Graduates of the Welding Technology program are eligible to take the American Welding Society Certification Guided Ben Test on 3/8 inch steel in the vertical and overhead position using either shielded-metal arc welding, gas-metal arc welding or flux-cored arc welding.

welding students need to be talented in eye-hand coordination

Eye-hand coordination is required so the welder can place precisely sized welds in any given joint. Other physical demands in this profession would include the ability to climb and maneuver structural steel.

The welding profession is very diversified. Students must be able to comprehend basic electricity and read blueprints.

job opportunities

There are unlimited job opportunities for advancement in industry for welders who become thoroughly acquainted with the techniques, materials, designs and new applications of the welding process. Welders have a wide array of career choices including welder operator, repair and maintenance welder, pipeline welder, welding supervisor, welding inspector, welding technician and welding engineer.

recommended background courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Math, Vocational Welding and Machining, Drafting and Communications.

9 months – credits required for graduation: 36

18 months – optional associate of applied science (a.a.s.) degree

credits required for graduation: 72

welding technology courses

AC 100	Applied Communications . . . . .	.25 credit
AED 100	Automated External Defibrillator . . . . .	.5 credit
CSC 100	Microcomputer Concepts	1 credit
PSYC 111	Applied Psychology	1 credit
WLD 105	Oxyacetylene Safety	1 credit
WLD 110	Proper Use of the Cutting Torch . . . . .	.5 credit
WLD 111	Shop Orientation Maintenance and Safety.	1 credit
WLD 112	Oxy-Fuel Welding Cutting.	2 credits
WLD 113	Shielded-Metal Arc Welding.	1.5 credits
WLD 114	Ferrous Metallurgy. . . . .	.5 credit
WLD 122	Gas-Metal Arc Welding I	4.5 credits
WLD 123	Blueprint Reading.	1 credit
WLD 125	Position Welding.	6 credits
WLD 135	Gas-Metal Arc Welding II.	3.5 credits
WLD 140	Flux-Cored Arc Welding	5 credits
WLD 151	Shop Math	2.5 credits
WLD 161	Gas-Tungsten Arc Welding	4 credits
WLD 165	Air-Carbon Arc Gouging. . . . .	.25 credit

ADDITIONAL COURSES FOR AAS DEGREE

WELDING - MACHINE TOOL EMPHASIS

BUS 101	Introduction to Business	3 credits
BUS 120	Principles of Marketing.	3 credits
CIS 102	Window Applications for Technicians	3 credits
MTT 101	Machine Tool Theory I.	1 credit
MTT 110	Precision Measuring.	1 credit
MTT 118	Turning/Milling Theory	1 credit
MTT 128	Lathe and Mill Operations	5.5 credits
MTT 134	Machine Tool Lab.	1 credit
MTT 167	Introduction to Computer Numerical Control (CNC)	1 credit
	Machine Tool Electives	6 credits OR
WLD 200	Pipe Welding I.	3 credits AND
WLD 205	Pipe Welding II.	3 credits
	Behavioral Science Elective.	3 credits
	Communications Elective	3 credits
	Mathematics Elective	3 credits
	Social Science Elective	3 credits

WELDING - MARKETING/MANAGEMENT/SALES EMPHASIS

ACCT 210	Principles of Accounting I	3 credits OR
BUS 101	Introduction to Business	3 credits
BUS 120	Principles of Marketing.	3 credits
BUS 160	Principles of Selling.	3 credits
BUS 162	Retailing	3 credits
BUS 170	Human Resources Management	3 credits
CIS 102	Windows Applications for Technicians.	3 credits
ECON 201	Principles of Microeconomics.	3 credits
WLD 200	Pipe Welding I	3 credits
	Business or Welding Elective.	3 credits
	Behavioral Science Elective.	3 credits
	Communications Elective	3 credits
	Mathematics Elective	3 credits

See Page 75 for a complete explanation.



course descriptions



- AC 100 APPLIED COMMUNICATIONS**
Designed to improve students' speaking, writing and listening skills as well as fundamentals of applying for and obtaining employment. Credit varies
- ACCT 210 PRINCIPLES OF ACCOUNTING I**
Basic accounting principles and practices for service and merchandising businesses. 3 credits
- ACCT 211 PRINCIPLES OF ACCOUNTING II**
Involves analysis and use of accounting practices for partnerships and corporations. Cash-flow statements and financial statements are prepared. 3 credits
- ACCT 214 COST ACCOUNTING**
Application of cost concepts, behavior and accounting techniques in the manufacturing environment. 3 credits
- ACCT 218 TAX ACCOUNTING I**
This course will enable students to complete an income tax return for individual tax payers, farmers and businesses. 3 credits
- ACCT 220 COMPUTER AND ACCOUNTING APPLICATIONS I**
Use of computer software to perform contemporary accounting procedures. 3 credits
- ACCT 222 PAYROLL ACCOUNTING**
Emphasis on personnel and payroll accounting. 3 credits
- ACCT 224 FINANCIAL STATEMENT ANALYSIS**
A practical introduction to financial analysis from the lender's perspective. 3 credits
- ACCT 230 PRINCIPLES OF ACCOUNTING III**
An overview of accounting and its theoretical foundations. Includes a review of the accounting cycle, cash and temporary investments, and accounts receivable, and their presentation on the balance sheet. 3 credits
- ACCT 233 PRINCIPLES OF ACCOUNTING IV**
Provides thorough training in accounting procedures as applied to non-current assets, long-term liabilities and owner's equity. 3 credits
- ACCT 237 APPLIED FEDERAL INCOME TAX**
Preparation of income tax returns for the low income and elderly; filing returns electronically is included. 3 credits
- AED 100 AUTOMATED EXTERNAL DEFIBRILLATOR**
To prepare individuals in the workplace to provide care for breathing emergencies, perform cardiopulmonary resuscitation (CPR) and use an automated external defibrillator (AED) for victims of sudden cardiac arrest. .5 credit
- AG 100 SOIL SCIENCE**
Determination of properties of various soils and their suitability for agricultural uses. Hands-on soil sampling and testing are emphasized as well as development of proficiency in interpreting soil survey maps. 3 credits
- AG 102 CROP SCIENCE**
A comprehensive review of the plant development cycle, from seedling to harvest-ready maturity. Appropriate environmental conditions, insect and disease control, harvesting, and storage are discussed. Profitable management is emphasized. 3 credits
- AG 106 ANIMAL HEALTH I**
The causes and management/control of disease and poisoning are determined. 2 credits
- AG 122 FERTILIZERS**
Identification of fertilizer elements, appropriate use, application procedures, and cost-effectiveness are covered. 2 credits
- AG 124 AG CHEMICALS**
The safe use of pesticides and herbicides is emphasized. Also discussed: weed and insect identification, chemical selection, and control programs. 2 credits
- AG 126 WEED MANAGEMENT**
Training to meet federal certification: recognition of pests and noxious weeds; selection, application and disposal of chemicals; construction of a field-mapping system. 2 credits
- AG 130 BUILDING PRINCIPLES**
This course covers all aspects of farm structure building, planning, design and economics. 1 credit
- AG 132 AG STRUCTURES**
Construction fundamentals and building construction. 2 credits
- AG 135 FARM POWER/ENGINES**
Discusses engine principles and design, safety, oil, fuel and coolant selection, and general engine and tractor maintenance principles. 1 credit
- AG 136 ADVANCED FARM POWER**
Covers fuel system maintenance, tractor and engine maintenance procedures and tractor tune-up procedures. 2 credits
- AG 158 FARM/RANCH RECORDS**
Application of standard financial procedures, using the computer to record, compile and complete typical financial records for farming operation projections. 2 credits
- AG 200 ANIMAL NUTRITION**
A comprehensive class dealing with general principles of animal nutrition. 2 credits
- AG 214 AG CHEMICAL EQUIPMENT**
Discusses proper use of equipment, cleaning procedures, keeping records and disposal of waste. 2 credits
- AG 216 FARM POWER/ELECTRICAL WIRING**
Covers electrical terms, circuits, design, usage, grounding, codes for wiring farm buildings and equipment, and how to troubleshoot electrical problems. (AGR 218 taken concurrently) 1 credit
- AG 218 ADVANCED ELECTRICAL WIRING**
The material covered in AG 216 is put to practical use during this course. (AGR 216 taken concurrently) 2 credits
- AG 221 MACHINERY MANAGEMENT**
A discussion of tractor setup, balance and field performance; combine adjustment and field performance; machinery economics such as ownership, leasing and investment. 2 credits
- AG 226 COMMODITY MARKETING**
Maximizing farm profit; using the futures market; hedging; avoiding dangers of speculation; participating in the options market; developing a personal market strategy. 2 credits
- AG 228 ADVANCED MARKETING**
Discussion of risk minimization through selected marketing procedures. 2 credits

- AG 247 INTERNSHIP**
Work-based learning. With instructor approval, students are placed in agri-business jobs which provide the opportunity to apply knowledge gained in the classroom. 6 credits
- AGR 104 COMMODITY MERCHANDISING**
Although designed for the farmer, this course is valuable to anyone interested in marketing commodities. Various strategies and options are discussed so that the student can develop an appropriate personal marketing plan. 2 credits
- AGR 110 ANIMAL SCIENCE**
The history and development of the livestock industry in South Dakota as well as selection and management of breeding stock, animal health, housing requirements and marketing strategies. 3 credits
- AGR 118 SOIL AND WATER MANAGEMENT**
Topics include water quality, the relationship between soil and water, identification of water sources, and South Dakota law affecting water usage. 2 credits
- AGR 120 SEED AND GRAIN TECHNOLOGY**
Grading of grain according to federal standards, selection of high-quality seed, proper storage and conditioning of seed, identification of crop and weed seeds, operation of grading equipment. 2 credits
- AGR 142 COMMERCIAL PESTICIDE CERTIFICATION**
Study, review and administer exam for the certification to apply commercial pesticides. .5 credit
- AGR 150 COMMERCIAL DRIVERS LICENSE PREPARATION**
Prepares the student to be eligible to take the CDL exam. .5 credit
- AGR 156 FARM MANAGEMENT I**
An introduction to good management and planning procedures; organizing the farming operation as a business using proven financial procedures and budgetary projections. 2 credits
- AGR 162 CO-OP PRINCIPLES**
Identification of the structure and scope of American cooperatives, the economic rationale, marketing and financing concepts, management, and structural dynamics. 2 credits
- AGR 165 BUSINESS SUPERVISED OCCUPATIONAL EXPERIENCE I (SOE)**
Work-based learning. With instructor approval, students are placed in agri-business jobs which provide the opportunity to apply knowledge gained in the classroom. 6 credits
- AGR 167 BUSINESS SUPERVISED OCCUPATIONAL EXPERIENCE II (SOE)**
Work-based learning. With instructor approval, students are placed in agri-business jobs which provide the opportunity to apply knowledge gained in the classroom. 5 credits
- AGR 169 PRODUCTION SUPERVISED OCCUPATIONAL EXPERIENCE I (SOE)**
To achieve proficiency in general management skills, students work at an established farm/ranch, usually their homes. Structured assignments must be completed. Instructors will visit the sites several times during this period. AGR 169 for the Dairy Option only is normally completed at the Midwest Dairy Institute (MDI) at Milbank, SD. 4 credits
- AGR 170 DAIRY SCIENCE**
An introduction to the development of South Dakota's dairy industry; topics include selection and management of a dairy herd, animal health and nutrition, housing requirements and marketing strategies. 2 credits
- AGR 202 LIVESTOCK NUTRITION PROBLEMS**
Application of principles discussed in AG 200: evaluation and formulation of suitable rations. Computers are used in this process. 2 credits
- AGR 204 ANIMAL HEALTH II**
Designed to familiarize students with animal diseases, health products and feed additives. 2 credits
- AGR 210 FORAGES AND GRASSES**
Production and management of common forages and grasses; management of tame pastures and rangelands; and various aspects of grazing practices. 2 credits
- AGR 212 PLANT DISEASE/INSECT IDENTIFICATION AND CONTROL**
Topics include pest/disease management, identification of pest/disease, control practices and the biology of the causal organisms. 2 credits
- AGR 222 FARM MACHINERY LAB**
Hands-on activities such as combine adjustment and performance; field demonstrations; maintenance and updates; GPS and field mapping; operation, calibration, adjustment and performance. 1 credit
- AGR 224 FACILITIES**
Introduction to facility planning and design. Includes analysis of EPA regulations pertaining to on-farm fuel storage, chemical and fertilizer storage/handling, and livestock waste management. 1 credit
- AGR 230 FARM ACCOUNTING II**
An advanced course of Farm Accounting I which utilizes the computer to keep and complete all records for farming operations. 2 credits
- AGR 232 FARM MANAGEMENT II**
This course covers how to determine the best business organization for the farm/ranch; blending multiple generations in a family operation; estate planning and generational transition; research projects and goal-setting. 2 credits
- AGR 236 BUSINESS MANAGEMENT I**
An introductory course which includes an overview of the business world: legal aspects, social responsibility, forms of ownership, management challenges, employee motivation, labor relations, and information management. 2 credits
- AGR 238 BUSINESS MANAGEMENT II**
Prerequisite: AGR 236. Topics include marketing, financial management and reporting, international business growth, and discussion of career implications. 2 credits
- AGR 244 SUPERVISION**
Development of knowledge and skills in planning, organization, communication, motivation and leadership. An important course for anyone, especially in the business world. 2 credits

- AGR 249 PRODUCTION SUPERVISED OCCUPATIONAL EXPERIENCE II (SOE)**
To achieve proficiency in general farm/ranch management skills, students work at an established farm/ranch, usually their homes. Structured assignments must be completed. AGR 249 for the Dairy Option only is normally completed at the Midwest Dairy Institute (MDI) at Milbank, SD. Sixty internship hours must be completed in Animal Health and for agronomy related business. Instructors will visit the sites several times during this period. 4 credits
- AGR 250 COMPUTER SOFTWARE APPLICATIONS FOR AGRICULTURE**
A review and evaluation of various software packages available today. Application of software to complete typical farm/ranch-use exercises so that the student will be able to use a computer effectively to meet the needs of his/her own farm or ranch. 2 credits
- AGR 252 ADVANCED NUTRITION**
Advanced discussion of nutrition and its effects on livestock. 2 credits
- AGR 262 PRECISION AGRICULTURE**
This course describes the basic purposes and concepts of precision farming. Basic tools of precision farming including GPS, CIS, and VRT will be used to collect, analyze, and apply the information. 2 credits
- ANAT 142 ANATOMY**
A study of cells, tissues and organs making up the integumentary, muscular, skeletal, nervous, endocrine, digestive, respiratory, lymphatic and urinary systems of the body. Emphasis is on structure and function of the systems and the relationship of the body structures (anatomy) to their function (physiology). 3 credits
- AT 100 SAFETY**
Safety practices in the lab. .5 credit
- AT 107 BRAKE SYSTEMS THEORY**
Operation of the complete braking system to include ABS. 3 credits
- AT 108 BRAKE SYSTEMS LAB**
Diagnosis and repair of braking systems including ABS. 4 credits
- AT 119 ALIGNMENT, SUSPENSION, STEERING AXLE THEORY**
Function and operation of all four of these systems. 3 credits
- AT 122 ALIGNMENT, SUSPENSION, STEERING AXLE LAB**
Diagnosis and repair of the suspension, steering, axle systems and alignment of the vehicle. 4.5 credits
- AT 146 HEATING AND AIR CONDITIONING THEORY**
Heating and air conditioning system operation and service procedures. Identification and handling of different refrigerants. 2 credits
- AT 148 HEATING AND AIR CONDITIONING LAB**
Heating and air conditioning system diagnosis, repair, and service procedures. 3 credits
- AT 155 ELECTRICAL/ELECTRONIC SYSTEMS THEORY**
Reading wiring diagrams and determining diagnostic procedures for the automotive electrical circuits. 3.5 credits
- AT 156 ELECTRICAL/ELECTRONIC SYSTEMS LAB**
Diagnosis and repair of automotive electrical systems. 6 credits
- AT 201 MANUAL DRIVE TRAIN/TRANSAXLE THEORY**
Diagnosis and repair of manual transmission/transaxle, four wheel drive transfer case and clutch systems. 2 credits
- AT 208 MANUAL DRIVE TRAIN/TRANSAXLE LAB**
Application of AT 201. 3 credits
- AT 212 AUTOMATIC TRANSMISSIONS/TRANSAXLE THEORY**
Service and external adjustments of automatic transmissions/transaxles. 2 credits
- AT 217 AUTOMATIC TRANSMISSIONS/TRANSAXLE LAB**
Automatic transmission/transaxle operation and diagnosis. Repair and rebuilding. 3 credits
- AT 221 ENGINE REPAIR THEORY**
Engine construction and theory of operation, diagnosis of failures, and proper repairs. 2 credits
- AT 225 ENGINE REPAIR LAB**
Application of AT 221. 3 credits
- AT 259 ENGINE PERFORMANCE THEORY**
Operation of electronic fuel injection and its related systems. 4 credits
- AT 263 ENGINE PERFORMANCE LAB**
Diagnosis and repair of driveability concerns. 8 credits
- AVM 100 FEDERAL AVIATION REGULATION PUBLICATIONS**
Exercise mechanic privileges within limitations; demonstrate ability to read, comprehend, and apply information contained in FAA and manufacturers aircraft maintenance specifications, data sheets, manuals, publications, and related federal aviation regulations, airworthiness directives, and advisory material; read technical data; write descriptions of aircraft discrepancies and corrective actions using typical aircraft maintenance records; complete required maintenance forms, records, and inspection reports. 1.5 credits
- AVM 103 APPLIED MATHEMATICS/AIRCRAFT WEIGHT AND BALANCE**
Apply required basic mathematics functions; weigh aircraft; perform complete weight forms, records, and inspection reports, and balance check and record data. 2.5 credits
- AVM 106 PHYSICS/AERODYNAMICS**
Determine and use the principles of simple machines; sound, fluid and heat dynamics; basic aerodynamics; aircraft structures, and theory of flight. 1.5 credits
- AVM 109 GROUND OPERATIONS AND SERVICING**
Start, move, service, and secure aircraft; identify and select fuels. 1 credit
- AVM 112 AIRCRAFT DRAWINGS**
Use symbols and schematic diagrams; draw sketches of repairs and alterations; use blueprint information; use graphs and charts. 1.5 credits
- AVM 115 MATERIALS AND PROCESSES**
Identify and select appropriate nondestructive test methods; perform dye penetrant, eddy current, ultrasonic, magnetic, and particle inspection; perform basic heat-treating processes; identify and select aircraft hardware and materials; inspect and check welds; perform precision measurements. 2 credits
- AVM 118 SHOP PRACTICES AND SAFETY**
Demonstrate safety-wiring bolts; wire a turnbuckle safely, identify and install cotter keys; remove and install a stud; install a helical; manufacture hammer head. 2 credits

AVM 121 BASIC ELECTRICITY

Calculate and measure capacitance and inductance; calculate and measure electrical power; measure voltage, current, resistance and continuity; determine the relationship of voltage, current, and resistance in electrical circuits; read and interpret electrical circuit diagrams including solid state devices and logic functions; inspect and service batteries. 2.5 credits

AVM 124 WELDING AND TUBULAR STRUCTURES

Weld magnesium, titanium, aluminum and stainless steel; fabricate tubular structures; solder, braze, gas-weld, and arc-weld steel. 1 credit

AVM 127 CORROSION CONTROL AND CLEANING

Identify and select cleaning materials; inspect, identify, remove and treat aircraft corrosion; perform aircraft cleaning. 2 credits

AVM 130 ASSEMBLY AND RIGGING

Rig rotary-wing aircraft; rig fixed-wing aircraft; check alignment of structures; assemble aircraft components, including flight-control surfaces; balance, rig, and inspect primary and secondary flight control surfaces; jack aircraft. 1.5 credits

AVM 133 AIRCRAFT FUELS AND FUEL SYSTEMS

Inspect, service and repair all fuel systems and components; perform fuel management, transfer, and defueling; inspect and repair fluid quantity indication systems; troubleshoot, service, and repair fluid pressure and temperature warning systems. 1 credit

AVM 136 NON-METALLIC/COMPOSITE STRUCTURES

Select, install and remove special fasteners for non-metallic, bonded, and composite structures; inspect bonded structures; inspect, test and repair fiberglass, plastics, honeycomb, composite, and laminated primary and secondary structures; inspect, check, service and repair windows, doors, and interior furnishings; inspect and repair sheet metal structures. 3 credits

AVM 139 METALLIC STRUCTURES

Install conventional aircraft rivets; hand-form, lay out and bend aircraft sheet metal; inspect and repair sheet metal aircraft structures. 3 credits

AVM 142 HYDRAULIC AND PNEUMATIC POWER SYSTEMS/LINES AND FITTINGS

Fabricate, install, inspect, check, troubleshoot, and repair hydraulic and pneumatic power systems. 2 credits

AVM 145 LANDING GEAR SYSTEMS

Inspect, check, service and repair landing gear, retraction system, shock struts, brakes, wheels, tires and steering systems. 2 credits

AVM 148 AIRFRAME ELECTRICAL SYSTEMS

Repair and inspect aircraft electrical system components. 3 credits

AVM 151 AIRFRAME INSTRUMENT SYSTEMS

Inspect, check, service, troubleshoot and repair electronic flight instrument systems; install instruments and perform a static-pressure leak test. 1 credit

AVM 154 COMMUNICATION AND NAVIGATION SYSTEMS I

Inspect, check, troubleshoot auto-pilot servos and approach-coupling systems; inspect, check and service aircraft electronic communication and navigation systems, including VHF passenger interphones and static-discharge devices, aircraft COR, ILS, omega, flight-management computers, and GPWS. 2 credits

AVM 157 UTILITY SYSTEMS

Inspect, check, troubleshoot, service and repair speed, space- and configuration-warning systems, electrical brake controls and anti-skid systems; airframe ice- and rain-control systems; smoke- and carbon-monoxide-detection systems; aircraft fire-detection and extinguishing systems. 2.5 credits

AVM 160 ENVIRONMENTAL SYSTEMS

Inspect, check, troubleshoot, service and repair heating, cooling, pressurization systems, and air cycle machines; air conditioning, pressurization systems; oxygen systems. 1.5 credits

AVM 163 AIRFRAME INSPECTIONS

Perform airframe conformity and airworthiness inspection. 2 credits

AVM 200 AIRFRAME INDEPENDENT STUDY

Assigned topics to prepare for FAA test. 1.5 credits

AVM 203 RECIPROCATING ENGINE THEORY

Learn how to inspect, check, service and repair reciprocating engines and engine installations. 1.5 credits

AVM 206 RECIPROCATING ENGINE MAINTENANCE AND OVERHAUL

Inspect and repair radial engines; overhaul reciprocating engines; inspect, check, service, and repair reciprocating engines and engine installations. 3 credits

AVM 209 ENGINE REMOVAL AND INSTALLATION

Install, troubleshoot, and remove engines. 1.5 credits

AVM 212 GAS TURBINE ENGINE TECHNOLOGY

Learn how to overhaul turbine engines; inspect, check, service and repair turbine engines and engine installations; unducted fan systems and components; turbine-driven auxiliary power units. 2 credits

AVM 215 GAS TURBINE ENGINE SERVICE AND MAINTENANCE

Practical application of techniques learned in AVM 212. 3 credits

AVM 218 LUBRICANTS AND LUBRICATION SYSTEMS

Identify and select lubricants; repair engine lubrication system components; inspect, check, service, troubleshoot and repair engine lubrication systems. 2 credits

AVM 221 FUELS AND FUEL METERING SYSTEMS

Inspect, check, service, troubleshoot, and repair engine fuel systems and components; troubleshoot, repair and adjust fuel-metering systems and electronic engine fuel controls; overhaul carburetor systems. 2 credits

AVM 224 FIRE PROTECTION SYSTEMS

Inspect, service, troubleshoot, and repair engine fire-detection and extinguishing systems. .5 credit

AVM 227 PROPELLERS AND ROTOR SYSTEMS

Inspect, check, service, and repair propeller-synchronizing and ice-control systems; identify and select propeller lubricants; balance propellers; repair propeller-control system components; install, troubleshoot and remove propellers; repair aluminum-alloy propeller blades. 2.5 credits

AVM 230 IGNITION AND STARTING SYSTEMS

Inspect, service, troubleshoot, and repair reciprocating and turbine-engine ignition systems and components, and turbine-engine pneumatic starting systems. 2.5 credits

AVM 233 INDUCTION AND SUPER-CHARGER SYSTEMS
Inspect, check, troubleshoot, service and repair engine ice and rain-control systems; heat exchangers, superchargers, and temperature-control systems; carburetor air-intake and induction manifolds. 1 credit

AVM 236 POWERPLANT ELECTRICAL SYSTEMS
Repair engine electrical system components; install, check, and service electrical wiring, controls, switches, indicators, and protective devices. 2.5 credits

AVM 239 COOLING SYSTEMS
Inspect, check, troubleshoot, service and repair engine cooling systems and components. .5 credit

AVM 242 EXHAUST AND THRUST REVERSER SYSTEMS
Inspect, check, troubleshoot, service, and repair engine exhaust systems, and components; troubleshoot and repair engine thrust-reverser systems and related components. .5 credit

AVM 245 POWERPLANT INSTRUMENT SYSTEMS
Troubleshoot, service and repair fluid rate-of-flow indicating systems; inspect, check, service, troubleshoot, and repair electrical mechanical engine-temperature, pressure and RPM indicating systems. 1 credit

AVM 248 POWERPLANT INSPECTIONS
Perform powerplant conformity and airworthiness inspections. 1 credit

AVM 251 COMMUNICATION AND NAVIGATION SYSTEMS II
Install and troubleshoot aircraft electronic communication and navigation systems. 2 credits

AVM 254 POWERPLANT INDEPENDENT STUDY
Assigned topics to prepare for FAA test. 1.5 credits

BTT 116 CONSTRUCTION TECHNOLOGY I
Includes the safe and proper use of tools in various construction projects. The semester will conclude with the framing and enclosure of a residential building. 7.25 credits

BTT 117 CONSTRUCTION PRACTICUM I
A practical building application with required assignments made on building projects. 7.5 credits

BTT 125 CABINTRY
Practical experience in the design and construction of cabinets for a residential structure. 3 credits

BTT 131 INTERIOR FINISHING
Application of various skills required to complete the interior finish in a residential building project. 2 credits

BTT 147 CONSTRUCTION PRACTICUM II
A practical building application with required assignments. 4.5 credits

BTT 156 RESIDENTIAL DRAFTING/CAD
Students receive training in the proper use of drafting equipment and do basic orthographic drawings. 2.5 credits

BTT 202 CONSTRUCTION TECHNOLOGY II
This course covers site preparation for excavation, concrete footings, concrete flat work, floor construction, wall and roof construction on a municipal lot. 4 credits

BTT 209 CONSTRUCTION PRACTICUM III
After completing this unit, the student should be able to place, test and finish concrete slabs. 11 credits

BTT 220 CONSTRUCTION ESTIMATING
Upon completion of this unit, the student will be able to prepare a detailed bill of materials sheet for a residential building project. 3 credits

BTT 235 CONSTRUCTION PRACTICUM IV
After completing this unit, the student will have the practical experience to perform interior finish procedures to industry standards. 10 credits

BTT 252 ADVANCED CONSTRUCTION TECHNOLOGY
Students will identify and install all interior finish products such as window trim, extension jams, baseboard, hand rails, hardware, etc. 2 credits

BUS 101 INTRO TO BUSINESS
An overview of the world of business. Topics include ethics, legalities, entrepreneurship, management techniques, marketing concepts, finance, risk management, international business and career development. 3 credits

BUS 103 MANAGEMENT SEMINARS I
This course is designed to supplement classroom education. Students will attend various seminars and conferences and will participate in workshops and appropriate campus business groups. These experiences provide opportunities for application of acquired knowledge and for personal growth. .5 credit

BUS 106 MANAGEMENT SEMINARS II
This course is designed to supplement classroom education. Students will attend various seminars and conferences and will participate in workshops and appropriate campus business groups. These experiences provide opportunities for application of acquired knowledge and for personal growth. .5 credit

BUS 120 PRINCIPLES OF MARKETING
An in-depth analysis of the total process, from conception through distribution and pricing of a product, service or idea. 3 credits

BUS 122 MARKETING RESEARCH
First-hand knowledge through an independent research project. Students will develop a project, compile data, evaluate data and draw conclusions for a local business or organization. Findings will be presented in statistical and graph forms and will include recommendations. 3 credits

BUS 140 BUSINESS LAW
An important basic course in how laws affect businesses. Students gain broad general knowledge and learn when and where to seek specialized advice and/or legal assistance. 3 credits

BUS 150 ADVERTISING
How advertising works; its effectiveness in promoting products, services and ideas. Students will develop a real coupon book and be involved in the total process. 4 credits

BUS 152 DESKTOP PUBLISHING
An introduction to desktop publishing software using Aldus Pagemaker. Students will be able to lay out ads, brochures, and newsletters upon completion of this course. 3 credits

BUS 160 PRINCIPLES OF SELLING
An overview of the sales process: selling, buying, customer relations, strategies, legal and ethical considerations. 3 credits

- BUS 162 RETAILING**
A broad overview: general procedures, career choices, buying behavior, merchandise control and pricing, human resources and productivity, store development and management are some of the topics covered. 3 credits
- BUS 170 HUMAN RESOURCES MANAGEMENT**
Provides a comprehensive understanding of what effective firms in competitive environments are doing to manage their human resources successfully. 3 credits
- BUS 185 E-BUSINESS**
Students learn the fundamental concepts of electronic commerce with hands-on activities to which they apply to their on-line business. This course introduces students to Web security issues, electronic payment systems, and legal issues needed in creating a functioning on-line store. Prerequisite includes a basic understanding of Windows and Web navigation skills, as well as fundamental Internet concepts. 3 credits
- BUS 200 PRINCIPLES OF BANKING**
An analysis of the evolution and organization of the United States banking system. Also, an overview of contemporary banking procedures. 3 credits
- BUS 209 PRINCIPLES OF INSURANCE**
Topics include laws and regulations, risk management, life, health, homeowners and auto insurance. 3 credits
- BUS 210 ENTREPRENEURSHIP**
How to start a business and manage it successfully. In addition to theory classes, computer-simulated business development will be utilized. Students must have successfully completed Accounting I and Accounting II of Financial Management before enrolling in this course. 3 credits
- BUS 212 PRINCIPLES OF FINANCE**
Students will construct and evaluate business plans, partake in an investment and challenge and learn more about money and banking. 3 credits
- BUS 215 BUSINESS ETHICS**
Deals with value-based leadership from top-management on down and focuses on purposeful actions that include planning and implementation of standards of ethical and appropriate conduct in today's business climate. 3 credits
- BUS 219 FUNDAMENTALS OF LENDING I**
Preparation for a job in any business that extends credit. Students acquire knowledge of credit laws and regulations. Skills are developed in credit computation, set-up and management of a credit department, completion of loan applications, and credit interviews. 3 credits
- BUS 220 PERSONAL FINANCE**
The emphasis is on development of money management and investment skills to enable the individual to lead an economically satisfying life and gain a secure retirement. 3 credits
- BUS 222 FUNDAMENTALS OF LENDING II**
Continuation of BUS 219. Evaluation of credit data, credit decision-making, completion of all documents required for consumer and real estate loans. 3 credits
- BUS 230 MANAGEMENT POLICY**
A comprehensive introduction to management theory and practice; designed to help the student meet the challenges of managing a contemporary business effectively. 3 credits
- BUS 231 MANAGEMENT SEMINARS**
Participation in seminars, workshops, conferences and campus organizations that pertain to marketing. Written reports and classroom discussion of the experiences are required. 2 credits
- BUS 235 BUSINESS INTERNSHIP**
Practical experience gained through working in a successful business. Students will experience the complete process, from resume development through the application process and job procurement to final evaluation. 6 credits
- BUS 236 FINANCIAL MANAGEMENT**
Emphasis is on determining the time value of money in decision-making, especially as applied to businesses. Students must have successfully completed Accounting I before enrolling in this course. 3 credits
- BUS 239 MANAGEMENT SEMINARS III**
This course is designed to supplement classroom education. Students will attend various seminars and conferences and will participate in workshops and appropriate campus business groups. These experiences provide opportunities for application of acquired knowledge and for personal growth. .5 credit
- BUS 240 BUSINESS INTERNSHIP**
3 credits
- BUS 242 MANAGEMENT SEMINARS IV**
This course is designed to supplement classroom education. Students will attend various seminars and conferences and will participate in workshops and appropriate campus business groups. These experiences provide opportunities for application of acquired knowledge and for personal growth. .5 credit
- BUS 246 & 247 INTERNSHIP A & B**
Work-based learning. Students are placed in appropriate jobs in the banking industry. Instructor approval is required. In lieu of this, students can take approved elective courses. 3 credits each
- CHEM 106 INORGANIC CHEMISTRY LECTURE (3 credits) AND CHEM 107 INORGANIC CHEMISTRY LAB (1 credit)**
This course is an introductory course designed to give the student a positive understanding and appreciation of the chemistry in their lives. Basic inorganic topics such as the study of atoms and molecules, chemical reactions, chemical equilibrium, states of matter and nuclear processes will be covered. The course will cover those chemical concepts necessary for the continued study of organic and biochemistry in Chemistry 108.
- CHEM 108 ORGANIC CHEMISTRY LECTURE (3 credits) AND CHEM 109 ORGANIC CHEMISTRY LAB (1 credit)**
Course covers organic chemistry and biochemistry. An understanding of the basic concepts is a necessary precursor to the discussion of the more specific topic of biochemistry. Prerequisite: CHEM 106 or permission of the instructor.
- CIS 100 PC MAINTENANCE**
This is an introduction to the fundamentals of PC hardware and software technologies with labs providing a hands-on approach to disassemble, reassemble and install PC hardware components and typical operating systems with connections to a variety of network services. 3 credits

CIS 102 WINDOW APPLICATIONS FOR TECHNICIANS
Using a Windows-based microcomputer and related software, you will gain an understanding and basic operational knowledge about the Windows XP operating system, Microsoft Office word processing, and spreadsheets, presentation software, and publishing software. You will demonstrate this knowledge by scoring at least 80% on assignments, related objective and performance tests. 3 credits

CIS 105 MICROCOMPUTER SOFTWARE APPLICATIONS
Using a Windows-based microcomputer and related software, you will gain an understanding and basic operational knowledge about microcomputer operating systems, word processing, spreadsheets, data bases, and presentation software. You will demonstrate this knowledge by scoring at least 80% on assignments, related objective, and performance tests. 3 credits

CIS 125 ADVANCED MICROCOMPUTER APPLICATIONS
Using a Windows-based microcomputer and related software, you will learn advanced techniques and applications of Microsoft XP Word, Excel, Access and PowerPoint. 3 credits

CIS 126 COMPUTER SOFTWARE APPS/CIS
This course will teach the skills that will help master features of Microsoft Office 2007 applications which include Word, Excel, Access and PowerPoint. 3 credits

CIS 127 ACCESS APPLICATION DEVELOPMENT
Using MS Access, students develop full-functioning business applications that include GUI forms, reports and web data access pages. 3 credits

CIS 132 INTRODUCTION TO COMPUTER PROGRAMMING
The student will be introduced to the basic concepts of programming in an object-oriented/event-driven language, including data types, selection and repetition structure and basic design. 3 credits

CIS 136 INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING
This course introduces the fundamentals of C++ and Java programming with emphasis on an object-oriented approach to writing applications. 3 credits

CIS 140 DATA BASE DESIGN & SQL
Utilizing such database products as Oracle, DB2 and SQL2000, students are introduced to the fundamentals of database design and management. SQL is used for data definition and manipulation. 3 credits

CIS 141 WEB DESIGN AND MAINTENANCE
The students will create and manage web sites using MS FrontPage. Final projects include creating a personal and business web site. 3 credits

CIS 160 UNIX OPERATING SYSTEM
Examines the concepts that are common to any Unix system using a hands-on approach to explore the UNIX file system, commands, application design and programming and an introduction to system management. 3 credits

CIS 170 PRINCIPLES OF GRAPHIC DESIGN
Two dimensional compositional skills are applied to basic design theory. 3 credits

CIS 200 ADVANCED PC MAINTENANCE - A+ CERTIFICATION
A further in-depth study of computer hardware and PC operating systems as preparation for becoming A+ certified. Students will begin the certification process by taking at least one of two required exams. 3 credits

CIS 215 CYBER SECURITY/ETHICAL HACKING
This hands-on course will introduce students to many aspects of network security. Students will learn the skills necessary to perform and present network intrusions on a variety of different computing platforms. 3 credits

CIS 232 ADVANCED VISUAL BASIC
The student will learn how to create and manipulate data files using sequential, random access and database formats. 3 credits

CIS 235 COMPUTER CRIME INVESTIGATION
Students will learn the policies, procedures, and technology to gather and analyze digital information in an authentic, accurate, and complete form for presentation as evidence in a business environment or, with proper credentials, a court of law. 3 credits

CIS 238 ADVANCED JAVA PROGRAMMING
More advanced features of OOP are covered as well as Java's networking, database and web capabilities. 3 credits

CIS 241 ADVANCED WEB DESIGN
This project based class will allow the student to demonstrate the techniques learned in the graphic and web design classes. Web security will also be addressed. 3 credits

CIS 252 MULTIMEDIA PRODUCTION/INTEGRATION
LATI has been recognized by the New Media Consortium as a world leader in innovative approaches in the use of technology. This course is taught in the Innovation Center using scanners, digital cameras and multimedia software such as Flash, Dreamweaver, Photoshop, Illuminatus, etc. 3 credits

CIS 253 COMPUTER GRAPHICS
The student will use graphics software with digital photography to demonstrate knowledge and skills of computer imagery. 3 credits

CIS 254 ANIMATION
This course includes creative projects, concise instructions, and complete coverage of basic to advanced skills, helping students to create and publish Macromedia Flash animations. 3 credits

CIS 260 UNIX OS ADMINISTRATION
An in-depth study of the UNIX operating system and topics related to the administration and installation of a UNIX computer system. Students will learn the necessary steps to administer the system, programs and users. 3 credits

CIS 265 TECHNICAL COMMUNICATIONS
Using modern communication devices and applications, the student will gain hands-on experience with on-line collaboration and presentations. 3 credits

CIS 270 INTRO TO DATABASE PROGRAMMING
Using SQL development tools in various database management systems, students learn to create stored procedures and database applications. 3 credits

- CIS 272 CLIENT/SERVER PROGRAMMING**
Students will access DB2, SQL and Oracle databases from PC clients using VB, MS Access and Java. PDAs, touch-screens, card-readers, speech synthesis and recognition are also incorporated into various applications. 3 credits
- CIS 273 WEB APPLICATIONS - ASP**
Students will gain experience in creating web-based, database-driven applications using Active Server Pages technology. 3 credits
- CIS 276 WEB APPLICATIONS - PHP**
Students will gain experience in creating web-based, database-driven applications using the PHP server-side scripting language. 3 credits
- CIS 280 WINDOWS SERVER ADMINISTRATION**
This class covers the role of the system administration of a Windows server environment from setup to management of a Windows network for small to midsize business environments. 3 credits
- CIS 290 SYSTEMS ANALYSIS AND DESIGN**
The student will learn to define and describe the five phases of the systems development life cycle. The student will work in a team to create a case study demonstrating their knowledge of this technique. 3 credits
- CIS 299 INTERNSHIP**
Provides the opportunity for the student to apply knowledge gained in the classroom. Internship consists of 240 hours at the job site. 4 credits
- COMM 101 CONTEMPORARY COMMUNICATION**
Emphasis on the essentials of written and oral communication; also included is a unit on effective communication in the job search process. 3 credits
- COS 100 SAFETY/SANITATION**
Promotion of good health and safety control measures in the beauty salon. 1.5 credits
- COS 103 SALON MANAGEMENT**
Study of the small business enterprise. Topics include business planning, basic bookkeeping, record keeping, sales and service, inventory control, public relations and payroll records. .5 credit
- COS 106 PERMANENT WAVING**
Instruction in the proper use of equipment and the reactions of chemicals in the waving process. Study with methods and techniques of waving hair. 2.75 credits
- COS 112 HAIRCUTTING**
Classroom instruction given on hair cutting techniques and the use of equipment in the hair cutting process. 2.5 credits
- COS 115 HAIRSTYLING**
Classroom instruction given on the procedures used in the styling of hair. 8 credits
- COS 121 SCIENTIFIC CONCEPTS**
Instruction on the fingernail and toenail, including growth, disease and care, as well as nail sculptures, tips and nail art. 1.25 credits
- COS 127 SAFETY/SANITATION**
Promotion of good health and safety control measures in the beauty salon. 1 credit
- COS 130 SALON MANAGEMENT**
Study of the small business enterprise. Topics include business planning, basic bookkeeping, recordkeeping, sales and service, inventory control, public relations and payroll records. 1.5 credits
- COS 133 PERMANENT WAVING**
Instruction in the proper use of equipment and the reactions of chemicals in the waving process. Study with methods and techniques of waving hair. 3 credits
- COS 136 HAIRCOLOR**
Instruction in the proper use of coloring in the hair. Includes types of coloring as related to differences in hair and hair texture, progressing from temporary to highlighting and special effects. 4 credits
- COS 139 HAIRCUTTING**
Classroom instruction given on hair cutting techniques and the use of equipment in the hair cutting process. 4 credits
- COS 145 ESTHETICS**
Study of the skin, its disorders and diseases that occur as a result of improper care. Includes the proper techniques used in facials and make-up procedures. Also offers exclusive training in use of facial firm machinery. 2.5 credits
- COS 148 MANICURE**
Instruction on the fingernail and toenail, including growth, disease and care, as well as nail sculptures, tips and nail art. .5 credit
- COS 151 CHEMICAL RELAXING**
Instruction on the difference of a base and no-base relaxer and safety methods. 1 credit
- COS 154 ELECTRICITY**
Basic electrical terms and benefits of electro-therapy, electrolysis, and thermolysis and high-frequency. .5 credit
- COS 203 SALON MANAGEMENT**
Study of the small business enterprise. Topics include business planning, basic bookkeeping, record keeping, sales and service, inventory control, public relations and payroll records. 1.5 credits
- COS 206 ESTHETICS**
Study of the skin, its disorders and diseases that occur as a result of improper care. Includes the proper techniques used in facials and makeup procedures. Also offers exclusive training in use of facial firm machinery. 1.25 credits
- COS 209 MASSAGE**
Study of massage manipulation to include head, scalp, neck, hands, legs, arms, and feet. 1.25 credits
- COS 212 HAIRCUTTING**
Classroom instruction given on hair cutting techniques and the use of equipment in the hair cutting process. 1.25 credits
- COS 215 HAIRSTYLING**
Classroom instruction given on the procedures used in the styling of hair. 2 credits
- COS 218 ESTHETICS**
Study of the skin, its disorders and diseases that occur as a result of improper care. Includes the proper techniques used in facials and make-up procedures. Also offers exclusive training in use of facial firm machinery. 2.25 credits
- COS 221 MANICURE**
Instruction on the fingernail and toenail, including growth, disease and care, as well as nail sculptures, tips and nail art. 2.5 credits

- COS 224 PRE-CLINICAL**
Practical experience in the shop setting with preliminary practice on mannequins and other students. Eventually, students will focus on working with patrons with an emphasis being placed on speed and workmanship. The end of the pre-clinical experience will place an emphasis on preparation for the South Dakota Cosmetology Commission's National Practical Examination. 4.75 credits
- COS 227 LAWS**
Introduction and review of the state laws and regulations set by the State Board of Cosmetology .5 credit
- COS 230 HAIRCOLOR**
Instruction in the proper use of coloring in the hair. Includes types of coloring as related to differences in hair and hair texture, progressing from temporary to highlighting and special effects. 1.25 credits
- CPR 110 CPR/AED FOR THE PROFESSIONAL RESCUER**
The purpose of the American Red Cross CPR/AED for the Professional Rescuer course is to teach those with a duty to act (professional rescuers) the skills needed to respond appropriately to breathing and cardiac emergencies. This includes the use of an automated external defibrillator (AED) to care for a victim of cardiac arrest. 1 credit
- CSC 100 MICROCOMPUTER CONCEPTS**
Using a Windows-based microcomputer and related software, you will gain an understanding and basic operational knowledge about the Windows XP operating system, Microsoft Office word processing and spreadsheets. You will demonstrate this knowledge by scoring at least 80% on assignments, related objective and performance tests. 1 credit
- DA 101 INTRODUCTION TO DENTISTRY**
Through this course, the student will gain knowledge of the early developments and major contributions to dentistry. It will also describe and explore the role, ethical and legal obligations of each member of the dental team by participating in professional and clinical support activities. 2 credits
- DA 105 PRECLINICAL SCIENCE**
The study of microorganisms pertaining to dentistry and the techniques necessary to prevent the transmission of disease by these organisms. This course will also identify pathological conditions that affect the teeth and oral tissues and their relationship to disease transmission. 2 credits
- DA 110 HEAD AND NECK ANATOMY**
Study of the types of teeth, anatomical features, embryonic development and histology of the teeth and oral structures. Also covers the identification of the bones, muscles associated with oral structures, nerves and blood vessels of the head and neck region. 3 credits
- DA 115 MEDICAL TERMINOLOGY**
Study of medical terminology including building, spelling, and defining medical terms used in the health field. 1 credit
- DA 120 PREVENTIVE DENTISTRY**
Study of preventive concepts of dentistry through patient education in toothbrushing, flossing, auxiliary aids and nutritional counseling. The clinical skills of coronal polish, fluoride, fluoride varnish and pit and fissure sealant application will be covered. 3 credits
- DA 126 CHAIRSIDE ASSISTING I**
Designed to give the student the opportunity to provide assistance to the doctor during the preparatory and operative phases of dental treatment and procedures. 4 credits
- DA 135 DENTAL MATERIALS I**
Study of physical properties, principles of manipulation and composition of restorative materials, alginate and gypsum products. 2.5 credits
- DA 141 PHARMACOLOGY AND MEDICAL EMERGENCIES**
Through this course, the student will become familiar with commonly prescribed drugs used in dentistry and recognize classifications of drugs, their indications, contraindications and potential side effects. The student will also identify the medically compromised patient and assist in emergency situations as needed. 2 credits
- DA 152 CHAIRSIDE ASSISTING II**
Designed to give the student the opportunity to provide assistance to the doctor during operative dentistry and the specialties. 3 credits
- DA 156 DEVELOPING PROFESSIONAL SKILLS**
Designed to give the student the opportunity to utilize the skills taught in the Dental Assisting program by performing specific tasks in a general dental practice. 1.5 credits
- DA 160 DENTAL MATERIALS II**
Study of physical properties, principles of manipulation, composition of impression and resin materials used in dentistry as well as fabrication of dental appliances. 2 credits
- DA 165 DENTAL RADIOLOGY I**
Covers the nature and behavior of radiation, radiology equipment operation, radiation production, safety, and basics of mounting, darkroom procedures, safety, and factors in radiographic quality. 2 credits
- DA 170 DENTAL RADIOLOGY II**
Students will expose various types of diagnostically acceptable radiographs on both mannequins and patients. 2.5 credits
- DA 176 OFFICE PROCEDURES**
Manual and computerized methods of record keeping, appointment scheduling, billing, insurance, collections and upkeep of dental records. 2 credits
- DA 181 PSYCHOLOGY AND HUMAN RELATIONS**
Covers methods used in dealing with a patient's behavior and identify mechanisms to overcome their anxieties. 1 credit
- DA 190 ORTHODONTICS**
This course provides instruction in performing many of the orthodontic functions routinely delegated to a dental assistant. 2 credits
- DA 210 CLINICAL PRACTICE AND EXPANDED FUNCTIONS**
Designed to give the student the opportunity to utilize the skills taught in the Dental Assisting program by performing specific tasks in various dental practices. 4 credits
- DT 107 WELDING TECHNOLOGIES**
Hands-on practice using gas and arc welding equipment. 1 credit
- DT 108 CONSUMER PRODUCTS THEORY**
An introduction to the maintenance of small engine powered equipment. .5 credit

- DT 113 CONSUMER PRODUCTS SHOP**
The practical application of repair and adjustment skills related to small engine powered equipment. 1 credit
- DT 119 HYDRAULIC SYSTEMS THEORY**
Introduces hydraulic system theory of operation including component identification and function. 1.5 credits
- DT 123 HYDRAULIC SYSTEMS SHOP**
Provides hands-on practice rebuilding hydraulic system components. 2.5 credits
- DT 126 BASIC ENGINE OVERHAUL THEORY**
Examination of operational theory of multi-cylinder gasoline engines and associated components. 1 credit
- DT 131 BASIC ENGINE OVERHAUL SHOP**
Develops skills in multi-cylinder engine overhaul, tune-up and troubleshooting. 3 credits
- DT 140 ELECTRICAL SYSTEMS THEORY**
Examines the principles of basic electricity as well as the theory of operation of batteries, starting and charging systems. 1 credit
- DT 146 ELECTRICAL SYSTEMS SHOP**
Provides shop practice servicing storage batteries, starting and charging systems. 2.5 credits
- DT 152 POWER TRAINS THEORY**
Introduces power train components and the theory of system operation. 1.5 credits
- DT 161 POWER TRAINS SHOP**
Reinforces power train theory with hands-on component rebuilding. 3 credits
- DT 165 HEATING, VENTILATION AND AIR CONDITIONING THEORY**
An introduction to the principles of operation of basic heating ventilation and air conditioning systems. 1.5 credits
- DT 167 HEATING, VENTILATION AND AIR CONDITIONING SHOP**
Develops the skills necessary to service HVAC systems including the identification, recovery and recycling of refrigerants. 2 credits
- DT 173 PREVENTIVE MAINTENANCE THEORY**
Outlines procedure for performing preventive maintenance on farm equipment, trucks and construction equipment. 1 credit
- DT 176 PREVENTIVE MAINTENANCE SHOP**
Actual performance of preventive maintenance on farm equipment, trucks and construction equipment. 1.5 credits
- DT 179 BASIC DIESEL ENGINES THEORY**
A study of the operational theory of diesel engines. .5 credit
- DT 180 BASIC DIESEL ENGINES SHOP**
An introduction to basic diesel engine servicing procedures. 1 credit
- DT 200 DIESEL FUEL SYSTEM DIAGNOSTICS THEORY**
An examination of the operation and troubleshooting of modern diesel engine fuel systems. 1.5 credits
- DT 201 DIESEL FUEL SYSTEM DIAGNOSTICS SHOP**
The hands-on diagnosis and repair of modern diesel engine fuel systems. 2 credits
- DT 202 DIESEL ENGINE OVERHAUL SHOP**
Develops the skills necessary for heavy duty diesel engine rebuilding. 2 credits
- DT 210 DIESEL ENGINE OVERHAUL THEORY**
A study of the theory of diesel engine operation and the procedures used for reconditioning. 1.5 credits
- DT 216 TRUCK SUSPENSION AND STEERING**
A presentation of the information required to service heavy truck suspension and steering components including fifth wheels. 4 credits
- DT 217 TRUCK BRAKE SYSTEMS**
The study and shop practice of servicing and troubleshooting heavy truck brake systems. 4 credits
- DT 219 DIESEL ENGINE TUNE-UP THEORY**
Examination of common diesel engine designs and tune-up methods. 1.5 credits
- DT 220 TRUCK PREVENTIVE MAINTENANCE**
The study and shop practice of medium/heavy truck preventive maintenance and inspection procedures including the annual Commercial Vehicle Safety Alliance inspection. Hands-on work to include truck and bus applications. 1.5 credits
- DT 223 DIESEL ENGINE TUNE-UP SHOP**
Hands-on application of diesel engine tune-up skills. 2 credits
- DT 225 TRUCK ELECTRICAL TESTING**
A presentation of the information required to diagnose malfunctions and repair truck electrical systems. 2 credits
- DT 229 ELECTRONIC ENGINE CONTROLS**
Basic theory of operation, programming and troubleshooting diesel engine electronic controls. 3 credits
- DT 231 TRUCK DRIVE TRAINS**
The information needed to inspect and repair clutches, transmissions, drive shafts and rear drive axles. 2 credits
- DT 234 TRACTOR SHOP PRODUCTION I**
Assigned shop exercises diagnosing malfunctions and repairing ag tractor hydraulic and electrical systems .5 credit
- DT 242 TRACTOR ELECTRICAL SYSTEM DIAGNOSTICS**
An introduction to the procedures and tools required to perform electrical testing and troubleshooting on a farm tractor. 1.5 credits
- DT 245 HYDRAULIC SYSTEM DIAGNOSTICS THEORY**
A study of hydraulic system diagnosis and repair. 1.5 credits
- DT 262 TRACTOR HVAC SYSTEM DIAGNOSTICS**
The study and practical application of heating ventilation and air conditioning system diagnosis and repair. 1.5 credits
- DT 264 TRUCK HVAC SYSTEM DIAGNOSTICS**
The practical application of truck heating ventilation and air conditioning system diagnosis and repair. 2 credits
- DT 265 ASE CERTIFICATION TESTING**
ASE Technician certification testing verifies that a technician's qualifications meet national standards. The LATI Diesel Technology program maintains ASE master certification status. 1 credit
- DT 267 SHOP MANAGEMENT**
An introduction to the management techniques applicable to a typical dealership. .5 credit

DT 278 COMBINE HYDRAULIC AND ELECTRICAL FAMILIARIZATION
A hands-on study of combine electro-hydraulic systems including component identification and testing procedures. 1 credit

DT 282 TRACTOR SHOP PRODUCTION II
The practical application of technical skills demonstrated by reconditioning production (customer owned) equipment, including engine and power train rebuilding. 7 credits

DT 288 HYDRAULIC SYSTEM DIAGNOSTICS SHOP
The practical troubleshooting, adjustment and repair of hydraulic systems. 2.5 credits

DT 291 TRACTOR ELECTRONIC CONTROLS/GLOBAL POSITIONING SYSTEMS AND AUTO STEER
An introduction to ag tractor electronic control systems and diagnostic procedures, with an emphasis on engine controls. 2.5 credits

ECON 101 ECONOMIC GEOGRAPHY
Discussion of population patterns and problems; technology and economic development; transportation; changing cities, including industrial location; energy production; the changing nature of agriculture. 3 credits

ECON 105 LEADERSHIP IN THE GLOBAL WORKPLACE
The study of traditional theories of leadership, as well as the most recently developed philosophies. Course will focus on the application of leadership concepts through critical thinking and the development of critical leadership skills need in the global workplace. Leadership traits, ethics, changing demographics, workforce diversity and financial planning are also included. 3 credits

ECON 201 PRINCIPLES OF MICROECONOMICS I
Studies the basic economic concepts as they relate to consumer, worker and business decisions. Emphasis is given to satisfaction maximizing behavior by individuals and profit maximization by firms. Market structures are thoroughly analyzed regarding their effect on price, output and competitiveness. 3 credits

ECON 202 PRINCIPLES OF MACROECONOMICS II
Principles of macroeconomics considers the economy as a whole, how its sectors interact and how monetary and fiscal policy can influence output, inflation, interest rates, unemployment, poverty, debt and other factors. 3 credits

EMT 100 EMT – BASIC
The EMT Basic class is a South Dakota approved training course consisting of 100 hours of classroom/practical training and 20 hours of clinical observation. The training focuses on caring for life threatening and non-life threatening situations and conditions, as well as other issues related to the sick and injured. Ultimately, the course is designed to prepare students for successful completion of the National Registry Exam. 5 credits

EN 100 PRACTICAL WRITING
An introduction to basic writing skills needed for successful academic writing. This course is designed to prepare students for ENGL 101. 3 credits

EN 110 BUSINESS COMMUNICATIONS
Business Communication prepares students to communicate effectively in the business environment. Communication skills will be developed through the process of analyzing communication, using the principles and techniques of good writing and practicing the creation of different forms of communication. 3 credits

ET 100 FUNDAMENTALS OF ENERGY PRODUCTION AND DISTRIBUTION
This course will help the student gain a strong knowledge of various energy sources and technologies through study and discussions on conventional, alternative, and emerging sources of energy. 2 credits

ET 105 OSHA/SAFETY
This course will cover OSHA laws, rules and regulations for the industrial construction and possible hazards in the workplace. Preventative measures that can be taken to insure your safety and the safety of those around you will also be covered. .5 credit

ET 110 MACHINE TOOL THEORY AND PRECISION MEASURING
An introduction to the basic hand tools and machine tools used to support manufacturing and toolmaking processes. Introduces the student to simple fractional measurements and advances to complex measurements and lay-out procedures. 1 credit

ET 115 MACHINE TOOL LAB
Provides shop time to develop basic competency on hand grinders, drill presses, saws, and layout tools. 2 credits

ET 120 TURBINE THEORY AND MAINTENANCE
This course provides students with the fundamentals of turbine theory and maintenance with emphasis on gas turbine engines used to produce electricity and drive pipeline pumps. 6 credits

ET 125 INTERPRETING MECHANICAL DRAWINGS
This course is developed around the latest technology standards accepted throughout industry and will cover the theory and practical applications students need to communicate technical concepts in an international marketplace. Starting with the basics, each topic being introduced will build on knowledge from the last. An understanding of these topics is developed through the use of practical exercises focusing on the new information. 1.5 credits

ET 130 BASIC VALVES
Students will learn about the different types, styles, sizes, and shapes of valves used in an industrial plant. Different design functions and the proper use of the valve's intended services will also be covered. 1 credit

ET 135 FORKLIFT AND MANLIFT OPERATION
This course will teach safe operations of both forklift and manlifts. Students will gain understanding and practical experience with the different types of lifts used in the industrial fields. 1 credit

ET 140 POWERPLANT FUNDAMENTALS
This course will explain the basic principles of electricity and electric power. Students will also learn the basic concepts involved in converting energy to electricity through a stream power plant. 2 credits

- ET 145 PROCESS BOILERS**
This course covers boiler operation and maintenance. Students will also receive a basic understanding of thermodynamics. 2 credits
- ET 150 PUMPS AND ROTATING EQUIPMENT**
Students will learn vibration analysis, equipment balancing, fluid analysis, and performance monitoring for pumps and rotating equipment. 2 credits
- ET 155 BASIC PIPE FITTING**
This course covers the basics in piping systems, the different types of materials used and their application. The student will also learn to take measurements, figure cut lengths, cut and prep pipe, fabricate fittings, and layout and cut various pipe intersections. 2 credits
- ET 160 INDUSTRIAL ELECTRICAL WIRING**
The study of wiring fundamentals in commercial/industrial settings. 2 credits
- ET 165 INTERNSHIP**
A 300-hour on-site internship placement in an energy production facility. 5 credits
- ET 200 WIND AND NUCLEAR ENERGY FUNDAMENTALS**
This course will cover the basic principles of wind and nuclear energy. 1 credit
- ET 205 PLANT OPERATION AND TROUBLESHOOTING**
Basic methods and equipment used in power generation and troubleshooting techniques. 3 credits
- ET 210 ETHANOL BIOFUELS PRODUCTION**
This course covers the basics of producing alternative fuels from agricultural products, including the production process. 3 credits
- ET 215 PIPE AND STAINLESS STEEL WELDING**
Orientation to gas tungsten arc welding on stainless steel pipe. 2 credits
- ET 220 HYDRAULICS THEORY AND MAINTENANCE**
Covers hydraulic principles, types of hydraulic fluids and their characteristics and maintenance basics. 1 credit
- ET 225 PLANT BLUEPRINTS AND DRAWINGS**
The basics of interpreting working drawings and blueprints, tolerances and allowances. 1.5 credits
- ET 230 BASIC MOTOR CONTROLS**
This course teaches troubleshooting of basic electric motor control systems. 2 credits
- ET 235 THERMODYNAMICS**
This course content includes basic energy thermodynamics and methods of heat transfer. 3 credits
- ET 240 INSTRUMENTS AND CONTROLS**
The study of the instrumentation commonly used in the industry along with its operation and maintenance. 3 credits
- ET 245 ENERGY INDUSTRY CODES AND REGULATIONS**
Study of the codes commonly standard to the industry and applicable regulations including their common applications. 2 credits
- ET 250 FLUID POWER**
Provides general information about pneumatics, pneumatic components, hydraulics, and hydraulic components. 2 credits
- ET 255 COMPOSITES MATERIAL AND STRUCTURES**
Study of composite materials utilized in the energy industry and inspection, testing and repairing. 1 credit
- ET 260 NON-DESTRUCTIVE INSPECTION**
This course will cover the methods of testing available to detect defects in different types of components and structures. 1 credit
- ENG 103 MECHANICAL DRAFTING I LAB**
Drawing mechanical problems with the knowledge gained from ENG 108. 3 credits
- ENG 108 INTRODUCTION TO ENGINEERING DRAWING THEORY**
Introduction to basic tools, major equipment and inking tools and techniques used in drafting. 1.5 credits
- ENG 109 ARCHITECTURAL DRAFTING I THEORY**
Residential design; working drawings, foundations, structural systems and building materials; site conditions; dimensioning; details. 2.5 credits
- ENG 112 ARCHITECTURAL DRAFTING I LAB W/CAD**
Production of a set of working drawings with the knowledge gained from ENG 109. 5 credits
- ENG 143 COMPUTER-ASSISTED DRAFTING I**
Axonometrics, dimension drawings, advanced commands, basic civil software. 3 credits
- ENG 144 COMPUTER ASSISTED DRAFTING II**
Using advanced CAD commands to create drawings representative of those needed in industry. 3 credits
- ENG 150 INTRODUCTION TO MECHANICAL THEORY II**
An introduction to some of the intermediate styles of drawings that can be created. 1 credit
- ENG 151 THEORY OF SURVEYING PRACTICE**
Performance of basic surveying operations. 2 credits
- ENG 153 MECHANICAL DRAFTING LAB II**
Drawing intermediate mechanical problems with the knowledge gained from ENG 150. 2 credits
- ENG 156 BASIC CIVIL DRAFTING**
Drawing of maps from basic field notes and general information. 1 credit
- ENG 176 BASIC SURVEYING PROCEDURES**
A practical application of surveying techniques and equipment used by most civil engineering firms. Students participate in survey crews. 3 credits
- ENG 203 APPLIED CIVIL MATHEMATICS**
Basic calculations of size, area, and volume, and application of that knowledge to working drawings. 2 credits
- ENG 215 CONCRETE TECHNOLOGY**
An analysis of concrete used in construction: types, application, sampling/test and quality estimation. 1 credit
- ENG 223 ADVANCED SURVEYING PROCEDURES**
A lab/application course in performing topographic, property and construction surveys. 6 credits
- ENG 229 ADVANCED CIVIL DRAFTING WITH CAD**
A lab/application course with emphasis on transforming field notes into typical civil engineering plans. 6 credits
- ENG 245 ARCHITECTURAL DRAFTING II THEORY**
Working drawings including dimensioning, details, electrical and heating systems and plumbing. 3 credits
- ENG 250 ENGINEERING DRAWING II THEORY**
Manufacturing processes; threads, fasteners and springs; axonometric projection; oblique projection; welding representation; auxiliary views; sectional views; tolerancing; gears and cams. 3 credits

- ENG 260 ARCHITECTURAL PRESENTATION**
Drawing of one and two-point perspectives, and rendering of perspectives. 1.5 credits
- ENG 261 MECHANICAL PRESENTATION**
Preparation of portfolios with drawings that demonstrate mastery in various areas of mechanical drafting. 1.5 credits
- ENG 271 ADVANCED MECHANICAL DRAWING WITH CAD**
Manipulation and use of mechanical software. 10 credits
- ENG 272 APPLIED CAD II - ARCHITECTURAL**
Manipulation and use of architectural software. 10 credits
- ENGL 101 COMPOSITION**
This course concentrates on all phases of the writing/communication process. Prewriting, drafting, revising and editing are used to help students develop clear, concise and unified writing styles that will serve them well in their chosen career areas. 3 credits
- ENGL 201 TECHNICAL WRITING**
This course will include instruction in the writing of procedural manuals, administrative reports, scientific papers, and pre-employment materials. 1 credit
- ENGL 210 INTRODUCTION TO LITERATURE**
Reading topics selected by individual instructors, used as a basis for student writing. 3 credits
- ENV 100 WATER QUALITY**
This course includes the study of basic water properties, characteristics, and pollution as they relate to ponds, lakes, rivers, and aquifer systems. Introduction to basic hydrology and hydrogeology effecting water quality issues. 3 credits
- ENV 102 INTRODUCTION TO ENVIRONMENTAL TECHNOLOGY**
Includes the study of basic concepts and practices involved in environmental technology, as well as applying that knowledge in critical thinking and problem solving. 2 credits
- ENV 105 INSTRUMENTATION**
This course includes the study of common laboratory instrumentation used by technicians in related fields. Safety, use of microscopes, calculations, pH meters, scales, nephelometers, pipeting, titration, and other wet chemistry instrumentation, spectrophotometry, colorimeters, and an introduction to basic field testing kits. 1 credit
- ENV 110 SOIL SCIENCE**
This course will investigate soil and water interactions, soil classifications; pollutions issues related to soils, and measures to prevent contamination both agricultural and industrial. 3 credits
- ENV 112 CURRENT ISSUES IN ENVIRONMENTAL TECHNOLOGY I**
An introduction to the processes and features that help shape and define our environment. Discussion of contemporary topics in ecology, hydrology, water/waste water management, and environmental assessments. 1 credit
- ENV 115 ENVIRONMENTAL SAMPLING AND MONITORING**
Introductory course concerning scientific sampling techniques and the scientific documentation required. 3 credits
- ENV 120 INTERNSHIP I**
300 hours - seven weeks of training at a wastewater treatment facility, or in a water-quality monitoring laboratory, or in a field-service setting. 5 credits
- ENV 203 ECOLOGY**
Discussion of ecology, land-use management, biodiversity and wildlife conservation, as well as related economics, policy, planning, and administration. 3 credits
- ENV 206 BOTONY**
A study of the fundamentals of plant biology, to include anatomy and physiology, growth, genetics, as well as an introduction into classification, and the role plants play in the environment. 4 credits
- ENV 207 PERMITS AND GRANT WRITING**
An introductory course of basic permits and grant writing currently used in government and industry related to environmental issues and projects. 1 credit
- ENV 209 STATISTICS**
A study of descriptive and inferential statistics especially related to research problems and quality control/assurance in the laboratory. 1 credit
- ENV 210 ENVIRONMENTAL ANALYSIS**
Collection and preservation of environmental samples, maintenance of detailed records and interpretation of results derived from analysis. Also included: discussion of geologic and hydrologic factors controlling the occurrence movement and chemical quality of ground water. 3 credits
- ENV 220 WATER AND WASTEWATER TECHNOLOGY**
This course will discuss the development, design, and operation of public water treatment systems and pollution-control facilities. 3 credits
- ENV 230 INTERNSHIP II**
360 hours (nine weeks) of training in advanced testing and control techniques at a treatment facility or water-quality monitoring laboratory or in a field-service setting. 5.5 credits
- ENV 235 HAZARDOUS MATERIAL COMPLIANCE**
Introduction to the proper handling, transportation and disposal of hazardous materials. 2 credits
- ENG 240 CAPSTONE PROJECT**
A self-study project demonstrating the educational and personal development received at Lake Area Tech. Credit assigned by instructor. 1-3 credits
- EST 103 PRINCIPLES OF DC CIRCUITS THEORY**
Covers the basic principles and applications of electricity and electronics. 3 credits
- EST 106 PRINCIPLES OF DC CIRCUITS LAB**
Provides hands-on experience in building, testing and troubleshooting DC/AC circuits. Includes basic soldering skills. 3 credits
- EST 109 PRINCIPLES OF AC CIRCUITS THEORY**
Covers the basic principles of AC circuits and applications. 3 credits
- EST 112 PRINCIPLES OF AC CIRCUITS LAB**
Provides students with hands-on experience in building, testing and troubleshooting AC circuits. 3 credits
- EST 115 ELECTRONICS DEVICES I THEORY**
Introduces theory and applications for diodes and transistors. This will include power supplies and transistor amplifier circuits. 3 credits

- EST 118 ELECTRONICS DEVICES I LAB**
Provides hands-on applications for diodes and transistors circuits which includes power supplies and transistor amplifier circuits. 3 credits
- EST 121 DIGITAL THEORY**
Introduces the principles of basic gates, numbering systems, decoders, encoder and flip-flops. 3 credits
- EST 124 DIGITAL LAB**
Provides hands-on applications of basic gates, Boolean algebra, decoders, encoders and flip-flops. 3 credits
- EST 246 CIRCUIT BOARD DESIGN AND LAYOUT**
This course will focus on the design and production of circuit boards. The student will design a circuit, transfer their design to software and produce a working circuit board. Each project will be as unique as the individual designing it. 4 credits
- EST 247 MICROCONTROLLERS BS2**
This course is designed to provide students with an introduction to micro controller programming and interfacing using a basic stamp module. The basic stamp module will allow the students to explore interfacing with outside devices to control lights, motion, sensors, and any number of other devices. 4 credits
- EST 250 ELECTRONIC DEVICES II THEORY**
Introduces theory and applications for JFETS, MOSFETS, thyristors and differential amplifiers. 2 credits
- EST 252 ELECTRONIC DEVICES II LAB**
Provides hands-on applications of JFETS, MOSFETS, thyristors and differential amplifiers circuits which include troubleshooting. 3 credits
- EST 267 REWORK, REPAIR AND SURFACE MOUNT SOLDERING**
Introduces assembly, rework and repair of through-hole and surface mount devices using the latest techniques and equipment. 1.5 credits
- EST 270 ELECTRONIC DEVICES II**
This course will provide practical experience in circuit applications for operational amplifiers and oscillators. 4 credits
- EST 271 ELECTRONIC DEVICES III**
This course provides students introduction to communications and cabling technologies. 4 credits
- HAZ 100 HAZARDOUS MATERIALS SAFETY**
Hazardous materials safety covers identifying types of hazardous material, demonstrating personal protective equipment, and identifying blood borne pathogens. .5 credit
- HST 101 ORIENTATION TO HUMAN SERVICES**
Provides an introduction to the philosophy of human services, the various professions involved in Human Services. 1 credit
- HST 108 GUIDING CHILDREN'S BEHAVIOR**
Emphasis is on using positive discipline, setting limits, guides to speech and action and developing self-control. 2 credits
- HST 114 LITERATURE, CREATIVITY AND IMAGINATION**
Development of preschool activity file. Materials and activities to include selecting stories, making flannel board characters and puppets and exploring art activities. 3 credits
- HST 116 EDUCARE OF INFANTS AND TODDLERS**
Development of activities that promote learning in infants and toddlers. An infant-toddler activity file is built. 2 credits
- HST 119 GROUP TECHNIQUES**
Various styles of group leadership will be discussed as well as group dynamics and processes. 1 credit
- HST 122 SERVICE LEARNING**
This course is designed to enhance professionalism in a student by participating in community events and organizations. .5 credit
- HST 125 ON-THE-JOB TRAINING I**
Actual experience working with children in the LATI Educare Center, Head Start, private preschools and other centers that involve young children. 2.5 credits
- HST 127 PERSONAL CARE ASSISTANT (NUTRITIONAL DIET)**
The student will learn to care for physical, emotional, social and safety needs of the elderly. Taught under the federal guidelines according to the OBRA laws. 2 credits
- HST 126 SERVICE LEARNING**
This course is designed to enhance professionalism in a student by participating in community events and organizations. 2 credits
- HST 129 LESSON PLANNING AND EARLY CHILD CURRICULUM**
Instruction in planning educational units for young children, preparation of materials for use with children that are developmentally appropriate. 4 credits
- HST 131 HEALTH, SAFETY AND NUTRITION I**
Basic nutrition with units on needs of infants, toddlers and preschoolers. Development of activities, materials and recipes for snacks, meals and special occasions. Promoting and maintaining health and safety standards. 3.5 credits
- HST 132 SEXUAL OFFENDING AND PEOPLE WITH DISABILITIES**
Provides a general overview of why people with disabilities might sexually offend, general offender behaviors and techniques for working with sexual offenders. 2 credits
- HST 134 CHILD GROWTH AND DEVELOPMENT**
Infants, toddlers, preschool and school-age children are studied with emphasis on their emotional, social, intellectual and physical development. 3 credits
- HST 136 MEDICATION ADMINISTRATION FOR UNAUTHORIZED PERSONNEL**
Introduces the student to the pharmacology standards, terminology and the different types of medication they will be assisting with. .5 credit
- HST 137 FAMILIES**
Make up of families in our society today and ways to work with parents. 2 credits
- HST 138 MENTAL HEALTH SEMINAR**
A variety of topics within the field of mental health will be studied in depth. 1 credit
- HST 139 DEATH AND DYING**
The student will become aware of the attitudes toward death. 1 credit
- HST 141 CHILDREN WITH SPECIAL NEEDS**
The study of children with special needs, their strengths and weaknesses. 1.5 credits
- HST 143 DEVELOPMENTAL DISABILITIES**
Discusses types, causes and classifications of disabilities as well as the sexual needs of these individuals. 2 credits

- HST 146 DISABILITIES SEMINAR**
A variety of topics within the field of disabilities will be studied in depth. 1 credit
- HST 149 BEHAVIOR HABILITATION TRAINING**
Provides students with behavior skills techniques. 3 credits
- HST 156 ON-THE-JOB TRAINING II**
Actual experience working with children at various sites. 3 credits
- HST 159 MINORITY STUDIES**
Study of various cultures and differences to help assist people of minority backgrounds. 2 credits
- HST 160 CLINICAL EXPERIENCE**
The student will spend one week at four different clinic sites for hands-on experience. 2 credits
- HST 164 PROGRAM PLANNING**
Presents various methods of developing program plans. 2 credits
- HST 165 SELECTED TOPICS IN ABNORMAL PSYCHOLOGY**
A self-directed study course on pre-selected topics. This course will utilize the e-learning system to view videos and complete assignments for each topic. 1 credit
- HST 173 SPECIAL TOPICS IN HUMAN SERVICES**
Current events and topics of special interest to the student will be researched and presented. 1 credit
- HST 176 CASEWORK SKILLS AND RESOURCES**
Students will be exposed to the process of written documentation, reporting procedure, program planning, quality assurance, investigations, as well as other areas. 3 credits
- HST 177 ETHICS AND ISSUES IN HUMAN SERVICES**
Topics covered will include confidentiality, ethical treatment, rights and responsibilities, appropriate care, professional liability, and any other topics relating to ethical behaviors in the field of human services. 2 credits
- HST 179 INTRODUCTION TO CRIMINAL JUSTICE**
Explores the roles and responsibilities of various agencies involved in the field of law enforcement and corrections. 3 credits
- HST 183 JUVENILE DELINQUENCY**
Introduces the student to challenges facing adolescents in today's world and the potential outcomes when there is a lack of support in the home and community. 3 credits
- HST 188 CHEMICAL DEPENDENCY**
Study of the addiction process and what part chemical dependency plays in the criminal justice system. 3 credits
- HST 189 ON-THE-JOB TRAINING III**
Actual hands-on experience in the Human Services career field. 3 credits
- HST 201 ON-THE-JOB TRAINING IN THE DEVELOPMENTAL DISABILITIES SETTING**
Four week on-the-job training will provide opportunities to implement learned theories into day-to-day experiences. 2.5 credits
- HST 203 ON-THE-JOB TRAINING IN THE MENTAL HEALTH SETTING**
Four week on-the-job training will provide opportunities to implement learned theories into day-to-day experiences. 2.5 credits

- LPN-GAP EXAM (CREDIT BY VERIFICATION)**
General Achievement Profile test used to assess the retention of the practical nursing curriculum. 12 credits
- MA 100 HUMAN ANATOMY AND PHYSIOLOGY**
Study of basic structures and functions of the body including the skeletal, muscular, nervous, circulatory, digestive, respiratory, urinary, endocrine and reproductive systems. 2 credits
- MA 105 INTRODUCTION TO MEDICAL ASSISTING I**
This course introduces medical office administrative procedures. Topics include written and oral communications, medical records management, filing systems, maintaining the office environment, patient orientation, and safety. Upon completion, students should be able to perform basic administrative skills in the office. 2 credits
- MA 115 MEDICAL TERMINOLOGY**
Spelling, building words using prefixes, suffixes, roots and combining forms, defining and recognizing words used in the health field. 1.5 credits
- MA 121 KEYBOARDING I**
Drills to increase speed and accuracy; correspondence reports. 1 credit
- MA 125 MEDICAL LAW AND ETHICS**
Basic legal relationship of physician and patient, including implied and informed consent, professional liability, invasion of privacy, breach of contract and the Medical Practice Act. 1.5 credits
- MA 130 UNDERSTANDING HUMAN BEHAVIOR/HUMAN GROWTH AND DEVELOPMENT**
Understanding human behavior, especially in the context of medical assisting; also the study of growth and development from conception to old age. 1.5 credits
- MA 146 KEYBOARDING II**
Drills to increase speed and accuracy; correspondence reports. 2 credits
- MA 150 INTRODUCTION TO MEDICAL ASSISTING II**
This course will include administrative functions of the office to include telephone techniques, appointment scheduling, patient education, billing and accounting procedures. Upon completion, the students should be able to perform basic administrative skills in the office. 2 credits
- MA 152 MEDICAL OFFICE PRACTICE**
This course will provide training and experience for the student in the position of a medical office assistant. The course provides a realistic simulation of employing the student and provides them with medical office experiences and acquaints them with procedures, forms and medical transcription. 1 credit
- MA 155 MEDICAL OFFICE TRANSCRIPTION I**
Care and operation of transcribing machines. Emphasis on accuracy, spelling medical terms in transcribing medical reports. 2.5 credits
- MA 160 PATHOLOGY**
Examines the various body systems, diseases and disorders. Attention given to neoplastic conditions and methods of treatment. 2 credits
- MA 165 PHARMACOLOGY**
Identification of basic drugs, their uses and effects on the body. Different modes of drug administration, the identification of injection areas and techniques. Drug administration math. 2 credits

- MA 167 MEDICAL CODING**
This course is designed to introduce and teach the student the necessary information needed to properly do medical coding using CPT and ICD-9 books. 2 credits
- MA 171 MEDICAL LABORATORY PROCEDURES**
Instruction and practical experience in basic lab procedures such as urinalysis, hematology, and collecting specimens. 2.5 credits
- MA 175 CLINICAL OFFICE PROCEDURES**
Instruction in patient preparation, draping, taking and recording of information, assisting the physician with examinations and caring for the examination room. 2 credits
- MA 200 MEDICAL OFFICE TRANSCRIPTION II**
Care and operation of transcribing machines. Emphasis on accuracy, spelling medical terms in transcribing medical reports. 2 credits
- MA 205 CLINICAL OFFICE PROCEDURES**
Instruction in patient preparation, draping, taking and recording of information, assisting the physician with examinations and caring for the examination room. 2 credits
- MA 211 COMPUTERIZED MEDICAL OFFICE PROCEDURES I**
This course includes material covering an introduction to NDC Medisoft and various tasks such as entering patient information, working with cases, and entering charge, payment, and adjustment transactions. 1.5 credits
- MA 212 PATIENT-TO-PAYMENT/INSURANCE PROCEDURES**
This course includes theory and practice for introductory medical insurance. The course will provide the student with the basics of coding and filing insurance claims. 1.5 credits
- MA 215 ADMINISTRATION OF MEDICATIONS**
Advanced study of pharmacology with emphasis on the administration of medication. 1 credit
- MA 220 DIAGNOSTIC AND THERAPEUTIC PROCEDURES**
Includes the study of radiology, allergies, physical therapy and electrocardiography as they apply to diagnosis and therapy. 1.5 credits
- MA 221 KEYBOARDING III**
Drills to increase speed and accuracy; correspondence reports. 2 credits
- MA 230 COMPUTERIZED MEDICAL OFFICE PROCEDURES II**
This course includes the continuation of work with NDC Medisoft and various tasks of scheduling, creating claims, printing reports and putting all the information together to complete the simulations. 2 credits
- MA 240 ADMINISTRATIVE AND CLINICAL EXTERNSHIP**
An eight-week, nonpaid, supervised experience in a medical facility. 4 credits
- MATH 100 APPLIED GENERAL MATH**
Emphasis on the ability to understand and apply math skills to solve problems in the world of work. 3 credits
- MATH 101 INTERMEDIATE ALGEBRA**
This course will enhance students' problem-solving skills and prepare them for mathematical problems to be faced in future courses and careers. 3 credits

- MATH 102 COLLEGE ALGEBRA**
Equations and inequalities polynomial functions and graphs, exponents, radicals, zeros of polynomials; exponential, logarithmic and inverse functions, applications and graphs. Other topics selected from sequences, series and complex numbers. 3 credits
- MATH 117 APPLIED TRIGONOMETRY**
The practical application of trigonometry as it applies to the shop setting. 1 credit
- MFR 100 PARAMEDIC PREPARATION**
Paramedic Preparation is an introduction into the world of advanced pre-hospital care. Topics included in the class include the well being of the paramedic, roles and responsibilities of the paramedic, illness and injury prevention, as well as ethical and legal issues related to modern medicine and pre-hospital care. 1.5 credits
- MFR 105 AIRWAY/IV MANAGEMENT**
This class addresses two of the most important skills required by paramedics. Students will learn the art of intravenous (IV) placement, drug therapies, medical mathematics and drug dose calculations. Also covered in the class is advanced airway management and ventilation, where the student will learn methods used to control a patient's airway and breathe for them. 3 credits
- MFR 110 TRAUMA ASSESSMENT AND TREATMENT**
This class focuses on the subject that causes an adrenaline rush in virtually every paramedic, "TRAUMA." If you like the CSI shows on TV, this will be your favorite class. Students learn about the different types and classes of injuries, as well as related problems, allowing them to put the pieces of the puzzle together, enabling them to administer life saving treatments. 3 credits
- MFR 115 SPECIAL CARE**
Special care focuses on those areas that are perhaps the most difficult for most paramedics. Topics covered in this class are related to patients that are very old (geriatrics) and the very young (neonatology/pediatrics). Also covered in the class is the care of the chronically ill patient and those patients with physical, mental and/or cultural challenges. 3 credits
- MFR 120 CLINICAL OBSERVATION I**
This observation period is designed to meet the requirements set by the State of South Dakota. This observation/interaction time will take place in an approved hospital, in an emergency department, critical care unit, operating room and an obstetrics unit. Students are encouraged to utilize the knowledge and skills developed in other classes to use as much as possible, but most important, students will see first-hand how sick and injured patients benefit from high quality care and that what they do can and will make a difference in the lives of others. 1 credit
- MFR 125 MEDICAL ASSESSMENT AND TREATMENT**
This class will focus on solving problems and treating those things that make people "SICK." Students will learn the anatomy, physiology and pathophysiology of the human body, which makes it function and what causes it to fail, from head to toe, and inside/outside. Some of the subjects included in this class include cardiology, pulmonology, endocrinology, neurology, toxicology and environmental emergencies. 4 credits

MFR 130 CLINICAL OBSERVATION II

This observation period is designed to meet the requirements set by the State of South Dakota. This observation/interaction time will take place in an approved hospital, in an emergency department, critical care unit, operating room and an obstetrics unit. Students are encouraged to utilize the knowledge and skills developed in other classes to use as much as possible, but most important, students will see first-hand how sick and injured patients benefit from high quality medical care and that what they do can and will make a difference in the lives of others. 5 credits

MFR 200 MED/FIRE RESCUE

This class will focus on ambulance operations, incident management, crime scene awareness and rural EMS. Since the world around us continues to become increasingly complex, this class will also address issues related to rescue awareness and operations, hazardous materials incidents, as well as responding to terrorist incidents. 1 credit

MFR 205 FIREFIGHTER I

Through classroom and hands-on experience, students will learn the essentials of firefighting. Beginning with an overview of the proud history and traditions associated with the fire service, students will progress into developing the knowledge and skills associated with behavior, safety and personal protective equipment. From there, the next step will involve water supplies and equipment, building construction, ladders and ropes. At this point, students will move into rescue operations, forcible entry and ventilation techniques, fire suppression, firefighter survival, as well as fire prevention, education and incident planning. Another area and perhaps the most important subject addressed in this class, as well as every other class in the program, is the need for students to actively pursue current and life-long physical and mental health. 5 credits

MFR 210 HAZARDOUS MATERIALS AWARENESS AND COMPLIANCE

HAZMAT teams are rapidly becoming a basic component of every fire department in the United States and the initial certification required for these teams is the awareness level. This class is designed to provide the knowledge and skills required to allow students to function as an integral part of a HAZMAT team. Subjects covered in the class include recognition and identification, information resources, personal protective equipment, protective actions, product control and air monitoring and terrorism awareness. 3 credits

MFR 215 CLINICAL OBSERVATION III

This observation period is designed to meet the requirements set by the State of South Dakota. This observation/interaction time will take place in an approved hospital, in an emergency department, critical care unit, operating room and an obstetrics unit. Students are encouraged to utilize the knowledge and skills developed in other classes to use as much as possible, but most important, students will see first-hand how sick and injured patients benefit from high quality medical care and that what they do can and will make a difference in the lives of others. 5 credits

MFR 220 FIREFIGHTER II

Through classroom and hands-on experience, students will learn the essentials of firefighting. Beginning with an overview of the proud history and traditions associated with the fire service, students will progress into developing the knowledge and skills associated with fire behavior, safety and personal protective equipment. From there, the next step will involve water supplies and equipment, building construction, ladders and ropes. At this point, students will move into rescue operations, forcible entry and ventilation techniques, fire suppression, firefighter survival, as well as fire prevention, education and incident planning. Another area and perhaps the most important subject addressed in this class, as well as every other class in the program, is the need for students to actively pursue current and life-long physical and mental health. 5 credits

MFR 225 AIRPORT RESCUE FIREFIGHTING "ARFF"

Every type of fire has its own characteristics, concerns and methods of control. Building upon knowledge gained in Firefighter I and II, students will learn basic airport awareness, airplane construction and fuels, fire suppression, occupant protection and extrication, as well as crash truck operation and tactics. 3 credits

MICR 231 GENERAL MICROBIOLOGY

Study of microorganisms emphasizing structure, metabolism, diseases, disease prevention and cure, immune systems and microbial ecology. 4 credits

MLT 101 INTRODUCTION TO MEDICAL LABORATORY

Course focuses on laboratory mathematics, discussion and implementation of safety practices, discussion and instruction in the areas of professionalism, ethics, accreditation and certification. 2 credits

MLT 105 URINALYSIS AND BODY FLUIDS

The study of urinalysis to include terms, physical, chemical and microscopic exam, as well as special screening tests employed. Includes the study of body fluids such as cerebral spinal fluid, semen, synovial fluid, amniotic fluid, and fecal specimens. 3 credits

MLT 115 HEMATOLOGY

The study of blood cells and cell development, recognition of normal and abnormal cell morphology, alterations present in disease, studies of anemias and leukemias, platelets and coagulation mechanism and tests employed in the laboratory. 4 credits

MLT 117 MOLECULAR BIOLOGY

A study of the fundamentals of molecular biology including isolating and manipulating DNA, recombinant DNA and production and use of monoclonal antibodies. 2 credits

MLT 125 SEMINAR

Topics assigned, based on perceived need. 1 credit

MLT 135 PRINCIPLES OF PHLEBOTOMY

The study of the procedures associated with drawing blood. 1 credit

MLT 150 WEB-BASED CASE STUDY

Students will demonstrate their knowledge in the medical laboratory via case-study workup and enhance their computer skills by preparing a web presentation of this case study. 1 credit

MLT 201 IMMUNOLOGY

The study of the immune system to include beneficial and nonbeneficial aspects as well as the tests used to detect the presence of disease. 3 credits

- MLT 205 APPLIED PHLEBOTOMY**
Students will spend 30 hours in an assigned clinical facility participating in drawing blood from patients. 1 credit
- MLT 210 MICROBIOLOGY, PARASITOLOGY, MYCOLOGY**
Study of microorganisms that may cause clinical infections including staining, culturing, incubation, isolation, identification, sterilization and media preparations. Also covers the study of viruses and fungi. 4 credits
- MLT 215 CLINICAL CHEMISTRY**
Classroom and clinical instruction on the chemical constituents of blood in health and disease. 4 credits
- MLT 221 IMMUNOHEMATOLOGY (Blood Banking)**
The study of all tests employed in a blood bank to include typing, antibody screening, unit selection, crossmatch and release of blood for transfusion. 4 credits
- MLT 225 PHLEBOTOMY PRACTICUM**
The student will spend a minimum of 40 hours performing phlebotomy during the clinical training period. .5 credit
- MLT 226 PRACTICUM I: GENERAL LAB PRACTICE, PHLEBOTOMY, HEMATOLOGY, CHEMISTRY, URINALYSIS**
The student will spend 12 weeks (480 hours) performing laboratory testing in the following areas: hematology, chemistry, urinalysis, phlebotomy, and general laboratory practice. The exact breakdown of the hours in each of the listed areas will be determined by the clinical site. 8 credits
- MLT 231 PRACTICUM II: MICROBIOLOGY, IMMUNOLOGY, IMMUNOHEMATOLOGY**
The student will spend six weeks (240 hours) performing laboratory testing in the areas of microbiology, immunology, and immunohematology. The exact breakdown of the hours in each of these areas will be determined by the clinical site. 4 credits
- MLT 236 CLINICAL CORRELATION**
The student will spend one week (40 hours) in review and clinical correlation. The review section may include EKG's, late and evening shifts, supervised night call/shift, time in respiratory therapy, or a few days in each department as an actual review. The entire week may be spent in a single department if the clinical site determines that the student needs more training in that area. 1 credit
- MLT 290 INDEPENDENT STUDY**
The student will select a topic dealing with a lab test, procedure and disease within the field of clinical lab science and research the topic, complete a paper and present the information to members of the laboratory profession. .5 credit
- MLT 295 CASE STUDY**
The student will develop a case study with lab patient data and research the disease or illness, complete the study and present the information to laboratory professionals. 1 credit
- MTT 101 MACHINE TOOL THEORY I**
An introduction to the basic hand tools and machine tools used to support manufacturing and toolmaking processes. 1 credit
- MTT 106 BLUEPRINT READING**
The basics of interpreting working drawings and blueprints, tolerances and allowances. 1 credit
- MTT 110 PRECISION MEASURING**
Introduces the student to simple fractional measurements and advances to complex measurements and lay-out procedures. 1 credit
- MTT 118 TURNING/MILLING THEORY**
Describe and explain engine lathe and milling machine practices. 1 credit
- MTT 128 LATHE AND MILL OPERATIONS**
Basic machine controls, safety, maintenance, set-up and operation of the vertical milling machine and lathe. 4 credits
- MTT 129 LATHE AND MILL OPERATIONS**
Basic machine controls, safety, maintenance, set-up and operation of the vertical milling machine and lathe. 5.5 credits
- MTT 134 MACHINE TOOL LAB**
Provides shop time to develop basic competency on hand grinders, drill presses, saws and lay-out tools. 1 credit
- MTT 152 ADVANCED LATHE AND MILL THEORY**
Advanced operations used to complete specified projects. 1 credit
- MTT 158 ADVANCED LATHE AND MILL OPERATIONS**
Advanced machine controls, safety, maintenance, set-up and operation of the horizontal milling machine. 5 credits
- MTT 167 INTRODUCTION TO COMPUTER NUMERICAL CONTROLS (CNC)**
Students will learn to program and run the CNC mill and lathe. 1 credit
- MTT 168 PRECISION GRINDING**
Abrasive machining process selection and identification; truing, dressing of grinding wheels; surface, cylindrical, tool and cutter grinding. 2 credits
- MTT 172 EMCO COMPUTER NUMERICAL CONTROL (CNC) TURNING CENTER OPERATIONS**
The application of formatting techniques on the CNC turning centers. 3 credits
- MTT 185 MILLTRONICS COMPUTER NUMERICAL CONTROL (CNC) MACHINING CENTER**
Introduction to Milltronics "Partner": programming (conversational and G&M code), operations and setup. 3 credits
- MTT 207 ADVANCED COMPUTER NUMERICAL CONTROL (CNC) THEORY**
Programming of specified exercises using cutter compensation, plane selection, looping, and various functions on a variety of machines and controllers. 2 credits
- MTT 208 ADVANCED COMPUTER NUMERICAL CONTROL (CNC) OPERATIONS**
Provides the student the lab time to run the programs developed in MTT 207. 3 credits
- MTT 212 CAD CAM**
This course introduces the student to the "Gibbs" and allows them to manufacture parts using the software. 1 credit
- MTT 217 ELECTRICAL DISCHARGE MACHINES OPERATIONS**
This course provides the students with theory and basic operation of the Hansvedt wire and Hansvedt sinker EDM machines. 1 credit

MTT 218 ADVANCED ELECTRICAL DISCHARGE MACHINES OPERATIONS

This course provides the students with advanced training which include using the 4-axis Mitsubishi wire, Hansvedt wire, and Hansvedt sinker EDM machines and programs as specified. 1 credit

MTT 221 FIXTURE MAKING THEORY

Develops a working knowledge of locating principles, clamping devices, tool requirements and design considerations. 1 credit

MTT 222 FIXTURE MAKING APPLICATIONS

This course provides the student the opportunity to apply principles of jig and fixture design, construction, and application by designing and constructing jig or fixture themselves. 2 credits

MTT 226 DIE-MAKING THEORY

Basic design and construction of blanking and piercing dies; basic press designs and feeding mechanisms as well as the principles of shear. 1 credit

MTT 227 DIE-MAKING LAB

This course provides time to demonstrate competencies in using the machines available to build a progressive die. 4 credits

MTT 236 COORDINATE MEASURING MACHINE

Introduction to precision measuring using a CMM with a torch probe. 1 credit

MTT 261 BASIC MOLDING PROCESSES

Introduces the student to the basic molding processes and principles. This course focuses on the plastic injection mold. 1 credit

MTT 267 BASIC MOLDING OPERATIONS

Provides the student with time to sharpen specified cutters, to use the machine tools available to make an injection mold, and manufacture parts. 4 credits

MTT 272 CINCINNATI MILACRON COMPUTER NUMERICAL CONTROL (CNC) THEORY

Study of programming, operation and set-up of the Cincinnati Machining Center. 1 credit

MTT 274 CINCINNATI MILACRON COMPUTER NUMERICAL CONTROL (CNC) OPERATIONS

Practical application of material presented in Cincinnati Milacron (CNC) Theory, MTT 272. 4 credits

MTT 277 PROJECT

This course provides time for the student to learn more in one of the specialty areas. 3 credits

NET 101 NETWORK CABLING

Students will gain experience in both copper and fiber-optics cabling; specifications, limitations, connections, testing and verification. 3 credits

NET 111 CCNA 1-NETWORKING BASICS

This class lays the foundation for the understanding of networking concepts and terms with a concentration on the OSI layers. This class is the first of four in a sequence that leads to a CCNA certification. 3 credits

NET 121 ROUTERS AND ROUTING BASICS

This class examines the elements of a network router from setup and configuration to troubleshooting the router. This class is the second of four in a sequence that leads to a CCNA certification. 3 credits

NET 126 BASIC DIGITAL AND THEORY APPLICATIONS

Introduces and provides hands-on applications of basic gates, numbering systems, decoders and encoders. 3 credits

NET 131 SWITCHING BASICS & INTERMEDIATE ROUTING

The student will design, implement and configure a network involving both routing and switching. This class is the third of four in a sequence that leads to a Cisco Certified Network Administrator certification. 3 credits

NET 141 WAN TECHNOLOGIES

The student will design, implement and configure a WAN using multiple operating system platforms. After completing this course the student should be prepared to take the certification exam for the CCNA. 3 credits

NET 151 ADVANCED ROUTING

This course focuses on advanced routing and using Cisco routers connected in local-area networks (LANs) and wide-area networks (WANs) typically found at medium to large network sites. 3 credits

NET 161 REMOTE ACCESS

The student will identify site requirements and solutions for WAN connections. Including point-to-point protocol, ISDN, frame relay, X.25, modems and dial-up. 3 credits

NET 171 MULTILAYER SWITCHING

The student will work with layer 2, 3 and 4 switching, along with fast Ethernet, gigabit Ethernet, bandwidth determinations and VLANs. 3 credits

NET 181 NETWORK TROUBLESHOOTING

This course is centered on troubleshooting. You will work with management and diagnostic tools. You will focus on troubleshooting LANs, WANs, routers, switches, protocols and protocol suites. 3 credits

NURS 260 CARING FOR PERSONS WITH HEALTH PROMOTION AND HEALTH MAINTENANCE NEEDS

Studies the human response to actual or potential health problems. An integrated lifespan approach is used to examine the nursing responsibilities in health promotion and maintenance. Theory as well as clinical and laboratory experiences in medical-surgical, pediatric, mental health and community settings are included. 9 credits

NURS 281 CARING FOR PERSONS ACROSS THE LIFESPAN

A family-centered course, focuses on human development and health. Nursing theory, as well as clinical and laboratory experiences, are provided in the areas of community, mental health and maternal-child health centers. 4 credits

NURS 283 COORDINATION OF CARE

Focuses on preparing the associate degree graduate for a professional nursing role. Includes the present and future trends in health care delivery. Prepares the learner to analyze self-behaviors that reflect caring in the nurse. Emphasizes the roles of manager of care and member within the discipline of nursing. 1 credit

NURS 285 CARING FOR PERSONS WITH RESTORATIVE/REHABILITATIVE NEEDS

Focuses on the nursing care of clients with restorative/rehabilitative nursing care needs. 9 credits

OTA 100 INTRODUCTION TO OCCUPATIONAL THERAPY

This course will present the philosophical base, history and development of the occupational therapy profession. The scope of practice, frames of reference, and role delineation will be explored. The teaching/learn-

ing process will be examined as well as laws affecting the profession. Other professional disciplines will be discussed and use of uniform terminology will be emphasized. 2 credits

OTA 105 ACTIVITY ANALYSIS

Activities that are utilized as treatment techniques and are analyzed using current activity analysis techniques. Introduction to adaptation and gradation for therapeutic use of activities is also addressed. 3 credits

OTA 111 KINESIOLOGY/NEUROLOGY FOR OCCUPATIONAL THERAPY ASSISTANT

This course addresses basic kinesiological and neurological principles related to normal movement, and the importance of using exercise as an adjunct to treatment. 5 credits

OTA 120 HUMAN DEVELOPMENT: PRENATAL THROUGH ADOLESCENT

This course will present theories of normal physical, cognitive and emotional development for the birth through adolescent population. Cultural, ethnic and socioeconomical diversity will be introduced. 2 credits

OTA 125 OCCUPATIONAL THERAPY APPLICATION I - PEDIATRIC PRACTICE

This course will present a basic education in the understanding of clinical theories and techniques used by Occupational Therapy with the pediatric through adolescent population. The OT process will be emphasized. Basic documentation, client settings and common diagnoses will be addressed. 3 credits

OTA 131 OCCUPATIONS AND ADAPTATIONS

This course will teach students remediation of work, leisure and self-care activities through the use of adaptation and gradation. Basic clinical documentation of these techniques will be emphasized. 4 credits

OTA 133 DOCUMENTATION FOR THE OCCUPATIONAL THERAPY ASSISTANT

This course is designed to address documentation skills expected from an Occupational Therapy Assistant. The course will address documentation skills including introducing the concept of observation versus agreement. SOAP Note documentation by Medicare B guidelines will be emphasized. Treatment Planning will also be introduced. 1 credit

OTA 135 DYNAMICS OF INTERACTION

This course will address the principles of group dynamics and interpersonal skills used with groups. The fundamentals of therapeutic communication techniques and observation skill will be emphasized. 2 credits

OTA 140 ETHICS AND ISSUES IN OCCUPATIONAL THERAPY

This course focuses on ethical and other important issues facing the occupational therapy profession. The Code of Ethics is incorporated as students explore ethical dilemmas faced in healthcare today. 2 credits

OTA 145 PSYCHOSOCIAL PRACTICE

This course presents common theories of psychosocial practice as well as the use of many Occupational Therapy frames of reference. It will also familiarize students with assessment and intervention techniques utilized in various settings. 3 credits

OTA 150 FIELDWORK I-A

A one-week fieldwork placement will be completed to allow students to observe and apply critical thinking skills based on previous academic information obtained and to apply observations to future academic courses. .5 credit

OTA 155 FIELDWORK I-B

A one-week fieldwork placement will be completed to allow students to observe and apply critical thinking skills based on previous academic information obtained and to apply observations to future academic courses. .5 credit

OTA 160 BEGINNING SIGN LANGUAGE

Introduction to signed exact English. Students will learn words and use them to communicate. 1 credit

OTA 200 HUMAN DEVELOPMENT: ADULT TO DEATH

This course will present theories of physical, cognitive, social and emotional development for the young adult to death. Cultural, ethnic, socioeconomic and sexual diversity will be discussed. Also, concepts and theories of death and dying will be presented. 1 credit

OTA 205 OCCUPATIONAL THERAPY APPLICATION II - ADULT PRACTICE

This course addresses documentation skills and builds on previous documentation experience. Assessments used and settings in which adult populations may receive Occupational Therapy services will be presented and remediation techniques for sensory, motor, perceptual and cognitive deficits will be explored. 3 credits

OTA 210 PATHOPHYSIOLOGY

This course will present the basic concepts of many diseases commonly addressed in Occupational Therapy. Treatment implementation and management of the conditions will be emphasized. 3 credits

OTA 220 PHYSICAL DISABILITIES LECTURE AND LAB

The course presents common theories as well as applications of physical disabilities practice. It will also familiarize students with intervention techniques utilized in various settings. Implementation techniques, equipment and tools as they apply to occupation will be addressed. Individual treatment planning and implementation will also be a focus. 5 credits

OTA 231 SPECIAL TOPICS IN OCCUPATIONAL THERAPY

This course will address professional development skills such as resume writing and interviewing. Students will investigate a current topic in Occupational Therapy. Students will also practice professional presentations skills. 1 credit

OTA 236 FIELDWORK II-A

Following successful completion of all academic courses, the student will complete two eight-week fieldwork placements at different sites, which allows them to apply theory and skills acquired during their education at Lake Area Tech. 5.5 credits

OTA 241 FIELDWORK II-B

Following successful completion of all academic courses, the student will complete two eight-week fieldwork placements at different sites, which allows them to apply theory and skills acquired during their education at Lake Area Tech. 5.5 credits

PHGY 210 HUMAN PHYSIOLOGY

Lectures, lab work and demonstrations of human physiological processes both normal and abnormal. 4 credits

PN 101 NURSING CONCEPTS A

Includes a general orientation to all areas of care and provides a foundation of all basic procedures used in meeting the patient's needs. A study of abbreviations and symbols is included. Also includes the study of drugs, methods of administration and dosage computation and provides information on classifications, therapeutic action, and the side-effects of drugs. Students will gain experience giving medications throughout the program. 9 credits

PN 105 NURSING CONCEPTS B

Course covers the history of nursing, community health, nutrition, mental health and geriatric nursing. Includes an introduction to improving health and preventing illness in the community, the study of nutrients, the food pyramid, water electrolytes, and pH, with an emphasis on how good nutrition is essential in promoting physical and mental health. Also covers mental health and illness including causes and rehabilitation. Studies the normal aging process, chronic conditions of aging and care environments and covers the role of the nurse in prevention of problems facing this group. 2.5 credits

PN 110 MEDICAL TERMINOLOGY

Study of medical terms, defining and recognizing words used in the health field. .5 credit

PN 116 NURSING CONCEPTS C

Covers the nursing of the childbearing family and children. The student will be introduced to the physiology and pregnancy, labor and delivery, the puerperium, fetal growth and development and the care of the newborn infant. Will also study the growth and development from infancy to adolescence and the health problems of each age group. 4.5 credits

PN 121 NURSING CONCEPTS D

Covers the nursing of the adult. The student will be introduced to the theory and practice of the physical, emotional, and spiritual needs of patients of all ages with common medical and surgical conditions that vary in severity. Also covers the role of the practical nurse in meeting the basic needs of patients in all stages of illness. Basic information concerning the effects of drugs, their uses and abuses are also studied. 11.5 credits

PN 130 PHARMACOLOGY

The study of drugs, methods of administration and dosage computation. It provides information on classifications, therapeutic action, and side-effects of drugs. Students have experience giving medications throughout the program. 1 credit

PN 200 NURSING CLINICAL

A continuation of PN 121 in the clinical setting with exposure to more complex nursing situations in which more than one patient may be assigned. 4 credits

PN 205 RESPONSIBILITIES OF THE LPN

Study of personal, educational and vocational responsibilities including legal, ethical and spiritual aspects of communication. Also covered are issues of management including leadership, delegation, and conflict management. 1 credit

PSYC 100 PSYCHOLOGY OF HUMAN RELATIONS

This course is designed to help a student recognize the importance of adjusting and getting along as a member of a working team. It will examine the role personality plays in the work environment and the personal qualities, interpersonal skills and values that employers are looking for. 3 credits

PSYC 101 GENERAL PSYCHOLOGY

This course is an introduction survey of the field of psychology with consideration of the biological bases of behavior, sensory and perceptual processes, learning and memory, human growth and development, social behavior and normal and abnormal behavior. 3 credits

PSYC 111 APPLIED PSYCHOLOGY

This course helps a student learn how to be a team member in a work environment. 1 credit

PSYC 251 ABNORMAL PSYCHOLOGY

A comprehensive study of abnormal personality behavior. Detailed examination of the origin, symptoms and treatments of psychological disorders. 3 credits

PTA 100 INTRODUCTION TO PHYSICAL THERAPIST ASSISTING

This course will introduce students to the field of physical therapy. Lecture topics and discussion will include history of the physical therapy profession, role and scope of PT/PTA, professional organization, educational and job opportunities, career decisions, confidentiality, licensure, physical therapy terminology, basic research procedures, multi-disciplinary team approach, communication within the healthcare fields, as well as current issues affecting the field of physical therapy. 2 credits

PTA 106 KINESIOLOGY

This course includes classroom instruction on basic kinesiological and biomechanical principles related to normal movement and their importance in understanding and implementing treatment programs. The course will provide an in-depth anatomy review with emphasis placed on musculoskeletal and neuromuscular relationships and function. Included in this course is gait analysis, with a focus on normal versus abnormal biomechanics. 3 credits

PTA 110 FUNDAMENTALS OF PHYSICAL THERAPIST ASSISTING

This course will include lecture and classroom instruction on the fundamental skills of physical therapist assisting required for patient care and treatment. These skills include documentation of patient care; aseptic/sterile techniques as well as a review of universal precautions; preparation of the patient, treatment areas, and equipment; passive range of motion in the traditional planes as well as the diagonal; posture and body mechanics; patient transfers; gait training with or without assistive devices; wheelchairs and wheelchair mobility; architectural barriers, and activities of daily living. The primary focus of this class will be the lab; most of the skills are hands-on. 4 credits

PTA 116 ETHICS AND ISSUES IN PHYSICAL THERAPY

This course includes classroom instruction and discussion in ethics and important issues facing the physical therapy profession and health care in general. Topics will include medical law and ethics, multi-disciplinary team approach, standards for practice and ethical conduct, professional liability, medical malpractice, confidentiality, HIPPA, quality assurance, employment issues, fiscal considerations, and third-party payers. 2 credits

PTA 120 OBSERVATION AND MEASUREMENT

This course includes classroom and laboratory instruction on the basic assessment skills necessary for monitoring patient progress and safety, and for making recommendations for treatment modification. Assessment techniques include vital signs, goniometry, manual muscle testing, posture, segmental length, girth and volume, skin and sensory assessment and environmental assessment. 4 credits

PTA 125 PHYSICAL AGENTS AND MASSAGE

This course will include classroom and laboratory instruction of the theory and techniques of applying physical therapy modalities including therapeutic heat and cold, ultrasound, hydrotherapy, phototherapy, and intermittent compression pump, and traction. Students will also be exposed to proper positioning and draping techniques for treatment to various body regions. Students will learn basic massage and soft tissue techniques. This course will also introduce the topics of universal precautions, sterile techniques, wound care, burn care, dressings, and bandaging of burns and wounds. 4 credits

PTA 136 ELECTROTHERAPY (2½ weeks)

This course will include classroom and laboratory instruction on the theory and application of therapeutic electrical current and biofeedback for pain modulation and neuromuscular facilitation and re-education as well as the use of electrical stimulation in combination with other therapeutic agents. 3 credits

PTA 141 CLINICAL AFFILIATION I (6 weeks)

Designated Clinical Instructor from the community-based physical therapy setting, who has a minimum of two years of clinical experience and LATI Academic Coordinator of Clinical Education will supervise student learning in the clinical setting. 4 credits

PTA 145 THEORIES OF THERAPEUTIC EXERCISE

This course will include classroom and laboratory instruction on the theory and technique of basic therapeutic exercises. Students will receive instruction in theories, stretching, strengthening and total joint replacement. 1 credit

PTA 150 PATHOLOGY FOR THE PTA

This course will provide students with the basic knowledge of diseases of the human body. Emphasis will be put on the description, etiology, signs and symptoms, diagnostic procedures, treatment, prognosis and prevention of pathologies most commonly treated in physical therapy. 2 credits

PTA 216 APPLICATIONS IN THERAPEUTIC EXERCISE

This course will consist of classroom and laboratory instruction on the technique of basic therapeutic exercise used for the treatment of musculoskeletal and cardiovascular disorders. 2 credits

PTA 220 MUSCULOSKELETAL DISORDERS AND TREATMENT

This course will consist of classroom and laboratory instruction on the management of common musculoskeletal disorders with emphasis on physical therapy treatment protocols. This course will also include a review of basic assessment and treatment procedures. 4 credits

PTA 225 PSYCHOSOCIAL CONSIDERATIONS IN PATIENT CARE

This course will consist of classroom instruction and discussion on topics such as therapist/patient/family response to illness/disability, cultural and age-related considerations, death and dying, the grieving process and appropriate interaction between the PTA and the patient/family. 2 credits

PTA 228 NEUROANATOMY AND NEUROLOGICAL DYSFUNCTION

This course includes classroom instruction in basic neuroanatomy, review of sensory, motor systems, higher cognitive processes, neurodevelopmental sequences, reflexes and autonomic nervous systems. Discussion of neurological pathology will allow students to recognize signs and symptoms and etiology of these disorders. 3 credits

PTA 229 HUMAN DEVELOPMENT AND PEDIATRIC DISORDERS

This course includes classroom instruction on: embryology, neurodevelopmental sequences, reflexes, critical competencies and pediatric disability. Students will become familiar with normal and abnormal development. This course will give students an opportunity to interact with children and understand the importance of play. 1 credit

PTA 231 SPECIAL TOPICS

This course will include classroom and laboratory instruction in a variety of topics considered specialties in the practice of physical therapy. Students will be exposed to the following: orthotics, sport bandaging and taping, geriatric disease processes and PT management, cardiopulmonary disease processes and PT management and alternative medicine. 2 credits

PTA 242 REHABILITATION PROCEDURES

This course includes classroom and laboratory instruction on rehabilitation procedures used in treating neurological disorders such as Multiple Sclerosis, Parkinson's disease, brain tumors, cerebellar disorders, Guillian Barré, peripheral neuropathies, head injury and spinal cord injury. Amputee rehabilitation and prosthetics will also be discussed. 4 credits

PTA 245 CLINICAL AFFILIATION II (6 weeks)

This course is a clinical practicum learning experience that takes place in a community-based physical therapy setting over a period of six consecutive weeks. It occurs after the completion of the first and second year of coursework and the Clinical Affiliation I. The student attends the clinic setting each day for a full workday. While in the clinic setting, the student practices physical therapist assistant procedures necessary for patient care. The clinical instructor provides opportunities for the student to observe and implement physical therapist assistant standards of practice. 4 credits

PTA 250 CLINICAL AFFILIATION III (6 weeks)
 This course is a clinical practicum learning experience that takes place in a community-based physical therapy setting over a period of six consecutive weeks. It occurs after the completion of the first and second year of coursework and Clinical Affiliations I and II. The student attends the clinic setting each day for a full workday. While in the clinic setting, the student practices physical therapist assistant procedures necessary for patient care. The clinical instructor provides opportunities for the students to observe and implement therapist assistant standards of practice. 4 credits

RBTC 200 BLUEPRINT READING/SOLID MODELING
 This course introduces students to reading and interpretation of industrial drawings as well as an introduction to 3D solid modeling. 3 credits

RBTC 202 ROBOTIC ENGINEERING
 Students will build a robot to perform a task or play a game using motor controls that include sensors, switches, solenoids, timers, counters and programmable logic controllers. 3 credits

RBTC 205 PROGRAMMABLE LOGIC CONTROLLERS
 Basic electronic control devices for industrial machines including interfacing of PLC's with pneumatics, hydraulics and sensors. 4 credits

RBTC 207 FLUID POWER
 Provides general information about pneumatics, pneumatic components, hydraulics and hydraulic components. 2 credits

RBTC 210 MECHANICAL SYSTEMS
 Introduction to drive systems including: gear ratios, alignment, chain and belt drives, component operation and installation. 1.5 credits

RBTC 216 BASIC COMPUTER NUMERICAL CONTROL (CNC) LATHE AND MILL
 Covers the principles involved in computerized numerical control of machine tools and primary programming techniques. 1 credit

RBTC 219 PROGRAMMABLE LOGIC CONTROLLERS' APPLICATIONS
 The practical application of basic electronic control devices. 4 credits

RBTC 221 PRECISION MEASURING
 The basics of interpreting working drawings and blueprints, tolerances and allowances. 1 credit

RBTC 225 MACHINE TOOL LAB
 An introduction to the basic machine tools used to support manufacturing and their applications. 2 credits

RBTC 227 FLEXIBLE MANUFACTURING SYSTEMS
 Covers integration of robotics, pneumatics, hydraulics, CNC lathe and mill, precision measuring, blueprint reading and machine tool. 2 credits

RBTC 230 WELDING PROCESS
 Instruction and hands-on exposure to basic welding. 2 credits

SOC 100 INTRODUCTION TO SOCIOLOGY
 Comprehensive study of society, with analysis of group life and other forces shaping human behavior. 3 credits

SPCM 101 FUNDAMENTALS OF SPEECH
 Introduces the study of speech fundamentals and critical thinking through frequent public speaking practice, including setting, purpose, audience and subject. 3 credits

WLD 105 OXYACETYLENE SAFETY
 Provides advanced knowledge about safety with oxyacetylene equipment and set-up. 1 credit

WLD 110 PROPER USE OF THE CUTTING TORCH
 After completion of this course, the student will have learned safety, identification of equipment and hands-on skills. .5 credit

WLD 111 SHOP ORIENTATION MAINTENANCE AND SAFETY
 Introduces basic course knowledge, general shop safety, and fire safety. 1 credit

WLD 112 OXY-FUEL WELDING CUTTING
 Students will learn to cut various thicknesses of metal using oxy-fuel cutting equipment. 2 credits

WLD 113 SHIELDED-METAL ARC WELDING
 Includes safety involving SMAW, identification of equipment, and hands-on skills for striking and maintaining an arc. 1.5 credits

WLD 114 FERROUS METALLURGY
 Identification of different ferrous and non-ferrous metals. Heat ranges that pertain to these materials. .5 credit

WLD 122 GAS-METAL ARC WELDING I
 Includes safety involving GMAW, identification of equipment used in GMAW, and information about how to set up equipment and accessories. With this information, students will be able to weld five different joints in four different positions. 4.5 credits

WLD 123 BLUEPRINT READING
 Provides information to help the student identify components of a blueprint. 1 credit

WLD 125 POSITION WELDING
 Provides knowledge about current adjustment and positioned and out-of-position welding skills. 6 credits

WLD 135 GAS-METAL ARC WELDING II
 Contains demonstrations involving GMAW and hands-on skills required for positioned and out-of-position welding. 3.5 credits

WLD 140 FLUX-CORED ARC WELDING
 Includes identification of equipment used, identification of consumables used, and hands-on skills required for FCAW. 5 credits

WLD 151 SHOP MATH
 Provides information to help the student use measuring tools and formulas. 2.5 credits

WLD 161 GAS-TUNGSTEN ARC WELDING
 Includes safety involving GTAW, identification of equipment and hands-on skills. 4 credits

WLD 165 AIR-CARBON ARC GOUGING
 Includes safety involving air-carbon arc gouging, identification of equipment and hands-on skills. .25 credit

WLD 200 PIPE WELDING I
 Orientation to pipe welding and joint descriptions. 3 credits

WLD 205 PIPE WELDING II
 Joint preparation and hands-on welding. 3 credits

WLD 210 STAINLESS STEEL WELDING

Orientation to gas tungsten arc welding on stainless steel pipe. 3 credits

WLD 230 STRUCTURAL MATERIAL WELDING

Introduction to shielded metal arc welding on structural steel. 3 credits

In programs indicated, students will select a course in each of four areas to meet general education requirements. Courses marked with an asterisk can be transferred directly to the university system under the terms of articulation agreements.

Mathematics

- MATH 100 Applied General Math
- MATH 101 Intermediate Algebra
- * MATH 102 College Algebra

Communications

- * SPCM 101 Fundamentals of Speech
- * ENGL 101 Composition
- COMM 101 Contemporary Communication

Behavioral Science

- * PSYC 101 General Psychology
- PSYC 100 Psychology of Human Relations

Social Science

- * ECON 201 Principles of Microeconomics I
- * ECON 202 Principles of Macroeconomics II
- * SOC 100 Introduction to Sociology
- ECON 101 Economic Geography
- ECON 105 Leadership in the Global Workplace

Additional Transferrable Courses

- PHGY 210
- ANAT 142
- CHEM 106
- CHEM 108
- MICR 231



faculty and administration



Jackie Abel Human Services Technician
B.S., 1986, Mankato State University

Alison Albertson Medical Lab Technician
M.S., 2005, University of North Dakota
B.S., 1981, South Dakota State University

Joanne Andersen General Education
B.S., 1971, Northern State University
M.S., 1997, South Dakota State University

Jensi Kellogg-Andrus General Education

John Annett Computer Information Systems
B.S., 1974, Sioux Falls College

Don Armstrong Computer Information Systems
A.A.S., 1994 Lake Area Technical Institute

Christina Barrett Physical Therapist Assistant
B.S., 1991, University of North Dakota
M.A., Ed., 2003, University of Phoenix

Kimberly Bellum Dean of Instruction
B.S., 1985, Northern State University
M.S., 1989, Northern State University

Dorothy "Dodie" Bemis General Education/Tech Prep
Coordinator
B.S., 1967, Northern State University
M.S., 1969, Northern State University

Christine Berger Electronic Systems Technology/Robotics
Diploma, 1983, Lake Area Technical Institute
B.S.E.E., 1987, South Dakota State University
M.S., 2003, South Dakota State University

Terry Beynon Engineering/Architectural Drafting
Diploma, 1993, Lake Area Technical Institute

Dr. Janet Bjordahl Chemistry
PhD., 1999, South Dakota State University

Rhonda Bradberry Dental Assisting
Diploma, 1973, Lake Area Technical Institute
B.S., 1992, Dakota State University

Paul Brandt Building Trades Technology
A.A.S. and BSE, 1978, University of South Dakota Springfield

Randy Breske Occupational Therapy Assistant
A.A.S., 1999, Lake Area Technical Institute

Karen Breitag Human Services Technician
B.S., 2006, Mount Marty College

Troy Breitag Environmental Technology
B.S., 1994, University of Minnesota, Mankato

Robin Brown Nursing
B.S.N., 1983, South Dakota State University
M.S.N., 1999, South Dakota State University

James Buhler Welding Technology
Vocational Credential
State Department of Vocational Technical Education

John Butterbrodt Sociology
M.S., 1979, South Dakota State University

Randy Carl Building Trades Technology

Terri Carson Computer Information Systems
B.A., 1987, Gustavus Adolphus College
M.S.C.E.T., 2002, Dakota State University

Mike Cartney Vice President
B.S., 1981, U.S. Air Force Academy
M.S., 1987, Purdue University
NDF, 2000, Harvard University

James Clendenin Agri-Business
B.S., 1979, South Dakota State University

Jackie Coleman Cosmetology
A.A.S., 1984, Lake Area Technical Institute

Linda Dylla Dental Assisting
Diploma, 1974, Lake Area Technical Institute
B.S., 1992, Dakota State University

Brad Edwards Multimedia Specialist
A.A.S., 2005, Lake Area Technical Institute

Doreen Endres Practical Nursing
B.S.N., 1996, South Dakota State University

Debra Ernst CPR/First Aid
Diploma, 1974, Lake Area Technical Institute

Sheryl Erp Information Systems
A.A.S., 2002, Lake Area Technical Institute

Cheryl Fischbach Practical Nursing
Diploma, 1981, Sioux Valley Hospital School of Nursing
B.S.N., 2001, Mount Marty College

Patricia Foley Practical Nursing
B.S.N., 1989, South Dakota State University

Katherine Yackley-Franken Librarian
M.A., 2006, Minnesota State University
B.A., 2003, Briar Cliff University

Dr. Melvin Gesink Medical Lab Technician
B.S., 1951, Calvin College
M.D., 1955, University of Iowa

Mona Gleysteen Medical Lab Technician
B.S., 1974, Colorado State University
M.S., 1992, University of North Dakota

Gina Grant Electronic Systems/Robotics
A.A.S., 2004, Lake Area Technical Institute

Jane Haan Marketing/Management/Sales
Diploma, 1986, Lake Area Technical Institute
B.A., 1990, Mount Marty College
M.S., 1993, South Dakota State University

John Harper Energy Technology

Cindy Heemeyer Cosmetology
Diploma, 1977, Lake Area Technical Institute

Dennis Heller Information Systems
Diploma, 1978, Lake Area Technical Institute

Brian Henrick Agri-Business
A.A.S., 2006, Lake Area Technical Institute

Bradley Herding Automotive Technology
Diploma, 1983, Moorhead Vo-Tech Institute

Richard Hetland Agri-Production
B.S., 1972, South Dakota State University

Pam Hohn General Education
B.S., 1977, Mount Marty College
M.Ed., 1999, South Dakota State University

Jack Holmquest General Education
B.A., 1971, Drake University
M.A., 1973, Drake University

Nancy Iverson Educational Services Center
B.A., 1972, South Dakota State University

Brooks Jacobsen Electronic Systems/Robotics
A.A.S., 2006, Lake Area Technical Institute

Vynita Jacobson General Education
B.S. Ed., 1973, University of South Dakota
M.A., 1993, University of South Dakota

Jamison Jalbert Welding Technology
North Dakota State University

Janet Jensen Dental Assisting Instructor

Doug Jerke Building Trades Technology
B.S., 1981, University of South Dakota at Springfield
M. Ed., 1995, South Dakota State University

Gary Johnson Aviation Maintenance Technology
Diploma, 1969, University of South Dakota, Springfield

Myron Johnson Business and Industry Training
and Agri-Business
Diploma, 1971, Lake Area Technical Institute

Jason Julius Multimedia Programmer
A.A.S., 2004, Lake Area Technical Institute
B.S., 2006, Mount Marty College

Julie Kalahar Occupational Therapy Assistant
B.A., 1992, Augustana College
M.S., 1994, University of South Dakota

Greg Klein Aviation Maintenance Technology
Diploma, 1977, Lake Area Technical Institute
B.S., 1986, Embry-Riddle Aeronautical University

Gary Kwasniewski Aviation Maintenance Technology
A.A.S., 1997, Lake Area Technical Institute

Laurene Larson Practical Nursing
LPN, 1971, Lake Area Technical Institute
B.S., 1988, South Dakota State University

Robert Larson General Education
B.S., 1972, South Dakota State University
M.Ed., 1974, South Dakota State University

Floyd Lehman Agri-Production
B.S., 1968, South Dakota State University

Kris Lindahl Medical Assisting
Diploma, 1989, Lake Area Technical Institute

Shawn Lohr Cosmetology
Diploma, 1983, Lake Area Technical Institute

Kelly McDaniel Financial Services
Diploma, 1984, Lake Area Technical Institute
B.S., 1991, South Dakota State University

Ron Meidinger Diesel Technology
Diploma, 1971, Lake Area Technical Institute

Corey Mushitz Diesel Technology
A.A.S., 2000, Lake Area Technical Institute

Kim Nerud Nursing
Diploma, 1989, Lake Area Technical Institute
A.D.N., 2000, University of South Dakota
B.S.N., 2001, South Dakota State University
M.S.N., 2006, University of Phoenix

Brenda Norton Physical Therapist Assistant
B.S., 2006, Western Governors University
A.A.S., 1990, College of St. Catherine's

Matt O'Farrell Information Systems
A.A.S., 2004, Lake Area Technical Institute
B.S., 2007, Mount Marty College

Brian Olson Agri-Business
A.A.S., 1982, Willmar Community College
B.S., 1998, University of Minnesota - Mankato

Jerry Olson Computer Information Systems
B.S., 1968, Northern State University

Shane Ortmeier Bookstore and Food Service Manager/
Student Activities Coordinator
A.A.S., 1991, Lake Area Technical Institute

Tim Page Machine Tool Technology
Diploma, 1986, Lake Area Technical Institute

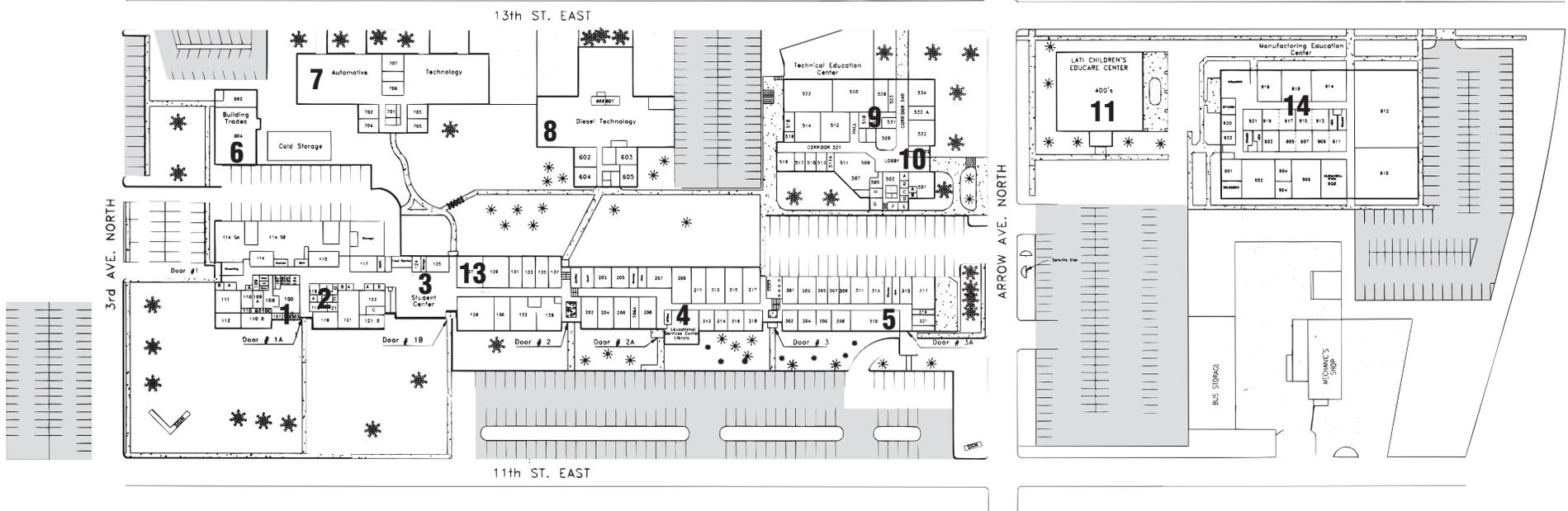
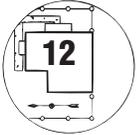
- Marie Palluck** Marketing/Management/Sales
B.A., 2003, Mount Marty College
M.A., 2005, Colorado Tech
- Steven Parkhurst** Automotive Lab Assistant
- Tom Paulson** Foundation Executive Director
B.S., 1978, University of South Dakota
- Steve Peters** Diesel Technology
B.S., 1971, South Dakota State University
- Wayne Pietz** CASE New Holland
Diploma, 1969, Western Technical College
B.S., 2004, South Dakota State University
- Lee Quale** Director of Enrollment
B.S. Ed., 1992, University of South Dakota
M.S., 2000, William Woods University
- Tristan Rabine** Information Systems
A.A.S., 2005, Lake Area Technical Institute
- Albert Raeder** Financial Services
B.S., 1968, South Dakota State University
M.A., 1970, South Dakota State University
- Mark Ramsey** Engineering/Architectural Drafting
Diploma, 1983, Lake Area Technical Institute
- John Rider** Machine Tool Technology
A.A.S., 1999, Lake Area Technical Institute
- Bob Scherbenske** Automotive Technology
A.A.S., 1985, Mitchell Technical Institute
- Marlene Seeklander** Financial Aid Director
Diploma, 1981, Minnesota West
B.A., 1989, Dakota State University
M.S. Ed., 1992, South Dakota State University
- Debra Shephard** President
B.S., 1975, University of South Dakota
M.Ed., 1987, South Dakota State University
- Dr. Aaron B. Shives** Medical Assisting
B.S., 1980, South Dakota State University
M.D., 1986, University of South Dakota
- Ronald Simley** Automotive Technology
A.A.S., 1978, North Dakota State College of Science
- Ronald Skatvold** Automotive Technology
A.A.S., 1974, University of South Dakota, Springfield
- Paula Smith** Medical Assisting
Diploma, 1990, Lake Area Technical Institute
- Sally Solum** Financial Services
B.S., 1981, Black Hills State University
M.Ed., 1996, South Dakota State University
- Rhonda Stangl** Practical Nursing
B.S.N., 1988, University of Mary
- Brian Stemwedel** Electronic Systems Technology/
General Education
B.S., 1965, Northern State University
- Sylvia Stott** Cosmetology
Diploma, 1972, Stewart's School of Hairstyling
- LuAnn Strait** Director of Institutional Relations
B.A., 1986, University of South Dakota
- Cindy Stupnik** General Education
B.A., 1989, South Dakota State University
M.A., 1999, South Dakota State University
- David TerEick** Applied Communications
B.S., 1971, Northern State University
- Carl Tesch** Diesel Technology
B.S., South Dakota State University
- Trent Theye** Building Trades Technology
A.A.S., 2001, Lake Area Technical Institute
- Brad Thuringer** Physical Therapist Assistant
A.A., 1986, Presentation College
B.S., 1994, South Dakota State University
A.A.S., 1997, Lake Area Technical Institute
- Jeanette True** General Education/Counselor
B.S., 1972, South Dakota State University
M. Ed., 1987, South Dakota State University
- Landon Vetter** Admissions Representative
B.A., 2003, South Dakota State University
- Mark Wayt** Computer Information Systems
B.A.E., 1980, Wayne State
M.S.E., 1983, Wayne State
- Larry "Bud" Webb** Admissions Representative
Northern State University
- Thomas Wolf** Engineering/Architectural Drafting
B.S., 1974, Northern State University
- Robin York** Practical Nursing
Diploma, 1976, Lake Area Technical Institute
BSN, 1984, South Dakota State University
MSN, 2006, Regis University
- Kelly Zillgitt** Diesel Technology
B.S., 1982, University of South Dakota, Springfield
- Dan Zimprich** Diesel Technology
Diploma, 1984, Lake Area Technical Institute



Lake Area TECHNICAL INSTITUTE

CAMPUS MAP

Aviation Maintenance Technology
Located at Airport
(882-6311)



- | | | |
|---------------------------------------|-------------------------------|-----------------------------------|
| 1 Administration/Admissions | 6 Building Trades | 11 Children's Educare Center |
| 2 Financial Aid | 7 Automotive Technology | 12 Aviation Technology |
| 3 Student Center | 8 Diesel Technology | 13 Bookstore |
| 4 Library/Educational Services Center | 9 Media Center | 14 Manufacturing Education Center |
| 5 Cosmetology | 10 Technical Education Center | |