

# Automotive Mechanic

## Certificate

981

**Division:** Technology

**Created:** 1/8/2002 3:03:18 PM

**Revised:** 2/10/2004

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the Automotive Technology Program will be capable of being successfully employed in the field.	Eighty percent of the graduates of the Automotive Technology Program will report employment in the field on the recent Alumni Survey distributed one year after graduation.	100% reported employment in the automotive field	The advisory committee will be informed
1	Graduates of the Automotive Technology Program will be capable of being successfully employed in the field.	Eighty percent of the graduates of the Automotive Technology Program will report employment in the field on the recent Alumni Survey distributed one year after graduation.	20% employed in an automotive related field, 80% took non related jobs for better pay.	The advisory committee will be given this information.
2	Graduates of the Automotive Technology will be technically proficient.	The Automotive Advisory Committee will rate the LLC automotive graduates that they work with on their technical skills. The graduates will average a 70% competency.	Committee has not yet met.	Results not usable.
3	Entry-level graduates with a certificate in Automotive Mechanic (981) will be able to:  3a. Communicate effectively and professionally in the automotive environment through proper use of verbal and written techniques.	80% of the students shall successfully role play in a customer/service writer situation with a fictional problem.	85% successful.	The English department will be advised of this success.
3.1	Apply mathematical skills in automotive problem solving.	80% of the students shall correctly answer an OHMS law question embedded in the Electrical 1 final.	75% answered correctly.	No changes at this time.
3.2	Apply logical and concise problem solving techniques while analyzing automotive test data.	80% of the students shall correctly answer an ASE engine performance question on the final for Engine Performance 1 class	Not yet collected for 2004	Will try a no-start diagnostic problem for next year.

# Automotive Mechanic

## Certificate

981

**Division:** Technology

**Created:** 1/8/2002 3:03:18 PM

**Revised:** 2/10/2004

<b>Mission</b>	Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong	<b>Goal</b>	Provide career education including occupational, vocational, technical training for employment, advancement or career change	
3.3	Be proficient in the use of modern diagnostic equipment to repair automotive systems consisting of mechanical, electrical and hydraulic systems.	100% of the students shall perform a job sheet satisfying NATEF task "8-B3" retrieving OBD2 trouble codes.	Not yet collected for 2004.	Job sheet will be given a higher priority.
3.4	Produce cost estimates and time schedules used in the automotive repair business.	75% of the Intro to Auto Technology class shall successfully complete a job estimate and a days schedule for a shop with 4 technicians.	45% completed tasks.	Better instruction for the task.
3.5	Understand the laws and regulations concerning the handling and storage of hazardous materials used in the automotive repair field.	80% of the Intro to Auto Technology class shall set up the hazardous waste system in a fictional shop.	3f. 50% completed task.	Better instruction for the task.
3.6	Perform the task as listed in the NATEF (National Automotive Technicians Education Foundation) automotive program standards task list for: - Engine repair - Brakes - Electronic systems (50% of the task) - Engine performance (40% of the task)	Students shall be assigned and shall receive an average competency score of 70% for the NATEF labs.	3g. Not yet collected for 2004.	Have not implemented the new tracking system to all classes yet.

# Automotive Technology

Associate in Applied Science

081

Division: Technology

Created: 1/8/2002 3:03:18 PM

Revised: 2/10/2004

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
2	Graduates of the Automotive Technology Program will be technically proficient.	The Automotive Advisory Committee will rate the LLC automotive graduates that they work with on their technical skills. 80% competency will be achieved	Committee has not yet met.	No changes at this time
3	Employers of the Automotive Technology Program graduates in the College district will be pleased with the education received by their employees.	The SOE employers will give an average score of "3" (Good) or better in a question rating the students overall knowledge of the automotive service industry, the scale is 1 to 4.	Average 3.4 rating achieved	Advisory committee will be informed.
4	Entry-level graduates with Associate of Applied Science degrees in Automotive Technology (081) will be able to:  Communicate effectively and professionally in the automotive environment through proper use of verbal and written techniques.	Evaluation by employer during SOE shall rate the students an average of "3" (Good) or better in a question evaluation their verbal and written communication skills.	average 3.0 rating achieved	Advisory committee and English Department will be informed.
4.1	Apply mathematical skills in algebra and geometry using analytical problem solving methods.	80% of the students shall correctly answer an OHMS law question embedded in the Electrical 1 final.	75% answered correctly	The Electrical I and Intro instructors will be informed to reinforce "ohms law".
4.2	Apply logical and concise problem solving techniques to technical problems.	Not yet collected for 2004.	Not collected for 2004.	No changes to be made at this time
4.3	Use of modern diagnostic equipment to repair automotive systems consisting of mechanical, electrical, hydraulic and pneumatic systems.	90% of the students shall perform a job sheet satisfying NATEF task "8-B-2", retrieving OBD2 trouble codes.	80% completed the task	No changes at this time.
4.4	Produce cost estimates and time schedules used in the automotive repair business.	75% of the Intro to Auto Technology class shall successfully complete a job estimate and a days schedule for a shop with 4 technicians.	45% completed the task	Improve the instructions

# Automotive Technology

Associate in Applied Science

081

**Division:** Technology

**Created:** 1/8/2002 3:03:18 PM

**Revised:** 2/10/2004

<b>Mission</b>	Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong	<b>Goal</b>	Provide career education including occupational, vocational, technical training for employment, advancement or career change
4.5	Describe the laws and regulations concerning the handling and storage of hazardous materials used in the automotive repair field.	80% of the Intro to Auto Technology class shall set up the hazardous waste system in a fictional shop.	74% completed the task Improve the instructions.
4.6	Perform the task as listed in the NATEF (National Automotive Technicians Education Foundation) automotive program standards task list for: -Engine repair -Brakes -Electronic systems -Engine performance -Suspension and Steering -Manual Transmissions and drive lines -Automatic transmissions and transaxles -Heating and air conditioning	NATEF (National Automotive Education Foundation) tasks will be assigned to the students and the class shall receive an average competency score of 70%. This will cover all 8 areas for the NATEF labs.	2003 - 75%, 2004 not yet collected No action taken at this time.
4.7	Graduation students will have a good understanding of what it takes to be ASE (Automotive Service Excellence) certified.	Students will average a score of 60% or higher on a 20 question ASE style test for each of the 8 automotive technology areas that ASE uses.	The students averaged 75%. ASE style test questions will continue to be used in the program.

# Building Construction Technology

Associate in Applied Science

082

**Division:** Technology

**Created:** 1/10/2002 2:29:57 PM

**Revised:** 5/11/2004

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the Building Construction Technology Program will be capable of being successfully employed in the construction industry.	The majority of graduates of B.C.T. report employment in the construction field in mid-May. Results to be compiled from the occupational follow-up survey.	There were 2 respondents to the May 2002 survey. 100 % were not actively seeking employment at that time.	No changes needed at this time.
2	Entry level graduates with Associate of Applied Science degrees in Building Construction Technology from Lake Land College will be able to:	Scoring at least 75% on the students' evaluation during their last semester courses that represent a combination of skills namely Architectural Drafting III, Construction Estimating & Strength of Materials. Results to be compiled from spring grade report.	The last B.C.T. class which completed requirements in Spring of 2004 - 100% of which had a greater evaluation than 75%.	
2.1	Demonstrate basic knowledge of materials used in building construction and their method of application	Provide a report on a material or process for a portfolio	Reports show understanding of their topics.	
2.1	Demonstrate a working knowledge of building construction cost estimating	Provide a copy of their final estimate for a portfolio	Estimates show a good understanding of the estimating procedure.	
2.2	Demonstrate an understanding of the fundamentals of plumbing, electricity, heating ventilation and air-conditioning	Provide a copy of drawings for a portfolio	Drawings & computations (where applicable) show understanding in areas measured.	
2.3	Demonstrate a working knowledge of structural steel shop drawings	Provide a copy of drawings for a portfolio	Drawings & computations (where applicable) show understanding in areas measured.	
2.4	Draw full sets of working drawings for residential and commercial building construction.	Provide a copy of drawings for a portfolio	Drawings & computations (where applicable) show understanding in areas measured.	
2.5	Demonstrate a proficiency in the use of computer aided design	Provide a copy of drawings for a portfolio	Drawings & computations (where applicable) show understanding in areas measured.	

---

# Building Construction Technology

082

**Division:** Technology

**Created:** 1/10/2002 2:29:57 PM

**Revised:** 5/11/2004

---

*Associate in Applied Science*

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

---

2.6	Demonstrate effective written communication skills.	Provide a copy of a written report for portfolio	The written report shows ability in writing.
2.7	Demonstrate a proficiency in math and a working knowledge of static and basic structural steel design	Administer test #4 of Strengths of Materials (TEC080) to majors at the end of the Spring Semester of their Sophomore year. The test results will be used to determine where students are weak. In measured areas where more than 50% of students miss , the questioned area will be examined for improvement	The test indicates a good working knowledge of math.
2.8	Demonstrate basic knowledge of civil survey	Provide a copy of drawings for a portfolio.	Drawings show understanding in areas measured.

**Mission** Lake Land College pledges to be responsive to the constantly changing educational and training needs of all students served.

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Communicate effectively and professionally about WAN and LAN technologies through proper use of written and graphical techniques.	80% of the students will score 70% or higher on the lab project on "-----" which is conducted toward the end of the program.		
2	Demonstrate the ability to configure WAN and LAN equipment.	80% of the students will score 75% or higher on the embedded WAN and LAN configuration items on the program exit exam administered in Cisco Also an item analysis will be conducted to determine specific strengths and weaknesses.		
3	Demonstrate ability to subnet and route IP networks.	80% of the students will score 75% or higher on the embedded IP network items on the program exit exam administered in Cisco Also an item analysis will be conducted to determine specific strengths and weaknesses.		
4	Demonstrate the ability to accurately diagnose and correct problems in LAN and WAN environments.	80% of the students will score 70% or higher on the final troubleshooting lab project which is conducted toward the end of the program.		
5	Demonstrate understanding of all seven layers of the OSI model	80% of the students will score 75% or higher on the embedded OSI layers items on the program exit exam administered in Cisco Also an item analysis will be conducted to determine specific strengths and weaknesses.		

# Civil Engineering Tech / Adv Tech Studies

094

**Division:** Technology

**Created:** 7/9/2003 12:40:10 PM

**Revised:**

*Associate in Applied Science*

**Mission** Lake Land College pledges to be responsive to the constantly changing educational and training needs of all students served.

**Goal**

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Communicate effectively in the construction environment through verbal, written, and graphic techniques.	80% of the portfolios collected will include writing compositions which are mainly free of significant errors in usage, writing mechanics, and spelling. 1b.80% of the students will score a 70 or better on their final project in Public Speaking.		
2	Develop mathematical skills in algebra and trigonometry.	80% of the students will score a 70 or better on the final examinations in College Algebra & Trigonometry.		
3	Demonstrate the ability to create engineering drawings for construction.	80% of the portfolios collected will include drawings that exhibit proper drafting techniques according to civil engineering standards.		
4	Demonstrate proper testing procedures for common construction materials.	80% of the students will score a 70 or better on the lab exercises in Soils & Aggregates, PCC, and Asphalt courses.		
5	Be proficient in the use of surveying equipment.	80% of the students will score a 70 or better on a practical examination demonstrating the proper use of surveying equipment.		
6	Be proficient in the use of computer software associated with civil engineering.	80% of the portfolios collected will include text documents, spreadsheets, and CAD drawings which are mainly free of significant errors and organize data in a clear and understandable manner.		

# Civil Engineering Technology

Associate in Applied Science

089

**Division:** Technology

**Created:** 10/29/2001 9:33:31 A

**Revised:** 6/3/2004

**Mission** Lake Land College pledges to be responsive to the constantly changing educational and training needs of all students served.

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the CET Program will be employable in the Civil Technology field.	80 % of graduates of the program will report employment in the Civil Engineering field upon graduation in Mid-May.	A) May 2001 graduating class – 96% of graduating class had jobs in mid June B) May 2002 graduating class – 96% of graduating class had jobs C) May 2003 graduating class – 85% of graduating class had jobs D) May 2004 graduating class – 43% of graduating class had jobs	A, B & C) Based on the high percentage of placement, very few changes in courses and curriculum seems appropriate. Changes made are a direct result of changes and advancement of technology in the field of Engineering. D) No changes at this time. A temporary freeze of IDOT jobs and construction projects has the job market down.
2	Entry-level graduates with Associate of Applied Science degrees in Civil Engineering Technology will be able to:  Communicate effectively and professionally in the construction environment through proper preparation of written reports.	80% of students in Soils class each fall will achieve a score of 75% or better on a written report following a prescribed format.	A) 70% of students, fall 2001 obtained a minimum 75% on the written report. This is below standard achievement. B) 85% of students, fall 2002 obtained a score of 75% or better. C) 92% of students, fall 2003 obtained a score of 75% or better.	A) Due to the low scores, a new class was introduced into the curriculum fall 200The class teaches the use of Microsoft Word and Excel. B) Fall 2002, scores have increased. No further changes at this time. C) No changes made at this time.
3	Apply mathematical skills in using analytical problem solving methods.	80% of students in Strength of Materials class will achieve a score of 75% or better for final grade each spring semester. Grades will be compiled the following Fall semester.	A) 83% of students, spring 2003 obtained a score of 75% or better. B) 81% of students, spring 2004 obtained a score of 75% or better.	A) Summer 2003, no changes made at this time. B) No changes made at this time.
4	Demonstrate a thorough knowledge of common civil construction materials- both in their production and placement.	80% of students in Civil Construction II will achieve a score of 75% or greater on creating a cost analysis and critical path diagram of a civil project. Project is due fall semester and results will be posted the following spring semester.	A) No current data available at this time. Criteria have been established as of fall 2002. B) 87% of students, fall 2003 obtained a score of 75% or better.	A) Summer 2003, no changes made at this time. B) Instructor is looking at changing projects in fall 2004 to update construction methodology.

# Civil Engineering Technology

Associate in Applied Science

089

**Division:** Technology

**Created:** 10/29/2001 9:33:31 A

**Revised:** 6/3/2004

<b>Mission</b>	Lake Land College pledges to be responsive to the constantly changing educational and training needs of all students served.	<b>Goal</b>	Provide career education including occupational, vocational, technical training for employment, advancement or career change
5	Be proficient in the use of surveying equipment.	80% of students in Surveying II class will achieve a score of 75% or better for a field proficiency exam each fall semester. Grades will be compiled the following spring semester.	A) 95% of students, fall 2002 obtained a score of 75% or better. A) Summer 2003, no changes made at this time. B) 93% of students, fall 2003 obtained a score of 75% or better. B) Summer 2004, no changes made at this time. Need to look at updating equipment - new total stations.
6	Be proficient in the concepts involved with the design and operation of open and closed fluid hydraulic situations.	80% of students in Hydraulics class will achieve a 75% or better for a final grade each spring. Grades will be compiled the following fall.	57% of students, spring 2003 obtained a score of 75% or better. Fall 2003 - After discussion about low achievement with Mr. VanDyke ( Division Chair), no tutor was available last year. We are going to try to find a tutor for the students.
7	Be proficient in concepts related to classifying and testing soils with respect to load carrying capacities in civil application.	80% of students in Soils class will achieve a 75% or better final grade.	A) 85% of students, fall 2002 obtained a 75% or better. A) Fall 2003 - No changes made at this time. B) 83% of students, fall 2003 obtained a 75% or better. B) Fall 2004 - No changes made.

# Civil Engineering Technology Co-op

Associate in Applied Science

090

Division: Technology

Created: 10/29/2001 9:47:04 A

Revised: 9/17/2003

**Mission** Lake Land College pledges to be responsive to the constantly changing educational and training needs of all students served.

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the CET Program will be employable in the Civil Technology field.  Entry-level graduates with Associate of Applied Science degrees in Civil Engineering Technology will be able to:	80 % of graduates of the program will report employment in the Civil Engineering field upon graduation in Mid-May.	A) May 2001 graduating class - 96% of graduating class had jobs in mid June  B) May 2002 graduating class - 96% of graduating class had jobs  C) May 2003 graduating class - 85% of graduating class had jobs	A, B, & C). Based on the high percentage of placement, very few changes in courses and curriculum seems appropriate. Changes made are a direct result of changes and advancement of technology in the field of Engineering.
2	Communicate effectively and professionally in the construction environment through proper preparation of written reports.	80% of students in Soils class each fall will achieve a score of 75% or better on a written report following a prescribed format.	A) 70% of students, fall of 2001 obtained a minimum 75% on the written report. This is below standard achievement.  B) 85% of students, fall 2002 obtained a score of 75% or better.	A) Due to the low scores, a new class was introduced into the curriculum fall 200The class teaches the use of Microsoft Word and Excel.  B) Fall 2002, scores have increased. No further changes at this time.
3	Apply mathematical skills in using analytical problem solving methods.	80% of students in Strength of Materials class will achieve a score of 75% or better for final grade each spring semester. Grades will be compiled the following Fall semester.	83% of students, spring of 2003 obtained a score of 75% or better.	Summer 2003, No changes made at this time.
4	Demonstrate a thorough knowledge of common civil construction materials- both in their production and placement.	80% of students in Civil Construction II will achieve a score of 75% or greater on creating a cost analysis and critical path diagram of a civil project. Project is due fall semester and results will be posted the following spring semester.	No current data available at this time. Criteria has been established as of fall 2002.	Summer 2003, No changes made at this time.
5	Be proficient in the use of surveying equipment.	80% of students in Surveying II class will achieve a score of 75% or better for a field proficiency exam each fall semester. Grades will be compiled the following spring semester.	95% of students, fall 2002 obtained a score of 75% or better.	Summer 2003, No changes made at this time.

# Civil Engineering Technology Co-op

Associate in Applied Science

090

**Division:** Technology

**Created:** 10/29/2001 9:47:04 A

**Revised:** 9/17/2003

<b>Mission</b>	Lake Land College pledges to be responsive to the constantly changing educational and training needs of all students served.	<b>Goal</b>	Provide career education including occupational, vocational, technical training for employment, advancement or career change	
6	Be proficient in the concepts involved with the design and operation of open and closed fluid hydraulic situations.	80% of students in Hydraulics class will achieve a 75% or better for a final grade each spring. Grades will be compiled the following fall.	57% of students, spring 2003 obtained a score of 75% or better.	Fall 2003 - After discussion about low achievement with Mr. VanDyke (Division Chair), no tutor was available last year. We are going to try to find a tutor for the students.
7	Be proficient in concepts related to classifying and testing soils with respect to load carrying capacities in civil application.	80% of students in Soils class will achieve a 75% or better final grade.	85% of students, fall 2002 obtained a 75% or better.	Fall 2003 - No changes made at this time.
8	Be proficient as an entry level technician during 15 month Supervised Occupational Experience.	80% of students will achieve an "average" rating or better by employer during the Supervised Occupational experience.	A) 92% of students, fall 2002 received average or above average rating. B) 91% of students, fall 2003 received average or above average rating.	A) Fall 2002 - No changes made. B) Fall 2003 - No changes made.

# Computer Aided Design

Associate in Applied Science

095

**Division:** Technology

**Created:** 1/29/2003 4:28:29 PM

**Revised:** 5/11/2004

**Mission** Provide career education including occupational, vocational, technical training for employment, advancement or career change which will

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the CAD A.A.S. Degree Program will be employable in an entry-level position as a CAD operator or CAD Designer.	75% OF CAD A.A.S. Degree graduates will report employment in a CAD related field based on a survey conducted by the College Placement Office during the fall semester of the school year following graduation.	Second year for graduating CAD Degree students, too soon to access. (Survey covers 2001 graduates.)	Help students find employment in the field of Computer Aided Design.
2	Employers of CAD graduates will be satisfied with their entry-level skills and education.	75% of CAD employers that respond to a survey conducted by the College will report that they are satisfied with the education and skills of their employees that have earned a CAD Degree.	Second year for graduating CAD Degree students, too soon to access. (Survey covers 2001 graduates.)	Work with employers and advisory council to insure that relative skills are learned by students.
3	Communicate effectively and professionally in the engineering environment through proper use of verbal, written and graphic techniques.	100% of graduating CAD Degree students will create a Portfolio presentation in 3D Parametric Design class to demonstrate their communications skills.	100% of graduating CAD Degree students created a Portfolio to demonstrate their communications skills and learning outcomes in various courses.	Continue to require CAD Degree students to create a Portfolio.
3	Entry-level graduates with degrees in Computer-Aided Design will be able to:			
3.1	Apply analytical and geometric skills to complete a 3D solid model from primitive shapes.	90% of graduating CAD Degree students will successfully complete a 3D parametric modeling and assembly project.	100% of graduating CAD Degree students successfully completed a 3D parametric modeling and assembly project.	Continue to require CAD Degree students to complete a 3D parametric modeling and assembly project.
3.2	Demonstrate the ability to develop and produce technical drawings and designs in the architectural, electronic, mechanical and civil engineering disciplines with a computer-aided drafting (CAD) system.	90% of graduating CAD Degree students will successfully complete at least one Civil, Architectural, Electronic and Mechanical CAD drawing.	100% of graduating CAD Degree students successfully completed at least one Civil, Architectural, Electronic and Mechanical CAD drawing.	Encourage all CAD Degree students to complete at least one Civil, Architectural, Electronic and Mechanical CAD drawing.

# Computer Aided Design

Associate in Applied Science

095

**Division:** Technology

**Created:** 1/29/2003 4:28:29 PM

**Revised:** 5/11/2004

<b>Mission</b>	Provide career education including occupational, vocational, technical training for employment, advancement or career change which will	<b>Goal</b>	Provide career education including occupational, vocational, technical training for employment, advancement or career change
3.3 Demonstrate an ability to follow written and oral instructions.	90% of graduating CAD Degree students will successfully complete a written tutorial, which will demonstrate their ability to follow written and oral instructions.	100% of graduating CAD Degree students successfully completed a written tutorial, which will demonstrated their ability to follow written and oral instructions.	Continue to require CAD Degree students complete written tutorials.
3.4 Demonstrate innovative and creative design ability.	90% of graduating students will demonstrate innovative and creative ability by designing a new working assembly or redesign an existing assembly with 4 or more individual parts.	67% of graduating students designed a new working assembly or redesigned an existing assembly with 4 or more individual parts.	Continue to require students to design working assemblies.

# Computer Aided Drafting

## Certificate

988

**Division:** Technology

**Created:** 1/11/2002 4:07:03 PM

**Revised:** 5/13/2004

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the CAD Certificate Program will be employable in an entry-level position as a CAD operator or CAD Technician.	75% OF CAD Certificate graduates will report employment in a CAD related field based on a survey conducted by the College Placement Office during the fall semester of the school year following graduation.	Of those responding to the college-wide occupational follow-up survey, 100% reported full-time employment with 50% employed in a CAD related field and 25% in a somewhat related field.	We will work more closely with the Career Services office and area employers to find students CAD related jobs.
2	Employers of CAD graduates will be satisfied with their entry-level skills and education.	75% of CAD employers that respond to a survey conducted by the College will report that they are satisfied with the education and skills of their employees that have earned a CAD Certificate.	An Employer Follow-up Survey was not completed this year. Several employers were contacted and they expressed satisfaction with the CAD students that worked for them.	We will continue to work with employers to keep curriculum updated and relevant.
3	Entry-level graduates with certificates in Computer-Aided Drafting will be able to:  a) Communicate effectively and professionally in the drafting environment through proper use of verbal, written and graphic techniques.	100% of graduating CAD Certificate students will create a Power Point presentation in Special Applications of CAD class to demonstrate their communications skills.	a) 73% of graduating CAD Certificate students completed a Power Point Presentation to demonstrate communication skills.	Encourage all CAD students to complete a Power Point presentation.
3.1	Apply analytical and geometric skills to complete a 3D solid model from primitive shapes.	90% of graduating CAD Certificate students successfully will complete a 3D solid modeling project.	100% of graduating CAD Certificate students demonstrated the ability to complete 3D Solid Modeling projects.	Encourage all CAD students to complete 3D Solid Modeling projects.
3.2	Demonstrate the ability to develop and produce technical drawings and designs in the architectural, electronic, mechanical and civil engineering disciplines with a computer-aided drafting (CAD) system.	90% of graduating CAD Certificate students successfully will complete at least one Civil, Architectural, Electronic and Mechanical CAD drawing.	91% of graduating CAD Certificate students successfully completed at least one Civil, Architectural, Mechanical and Electronic CAD project.	Encourage all CAD students to complete CAD projects in the Civil, Architectural, Mechanical and Electronic fields.
3.3	Demonstrate an ability to follow written and oral instructions.	90% of graduating CAD Certificate students successfully will complete an Inventor tutorial, which will demonstrate the ability to follow written and oral instructions.	74% of graduating CAD Certificate students demonstrated the ability to follow written instructions by completing a written tutorial using AutoDesk Inventor software.	Encourage all CAD students to demonstrate their ability to follow written instructions.

# Computer Integrated Manufacturing Technolog 085

Associate in Applied Science

Division: Technology

Created: 1/15/2002

Revised: 5/11/2004

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the Computer Integrated Manufacturing Technology Program will be capable of successful employment in the manufacturing field.	75% of Computer Integrated Manufacturing Technology graduates will report successful employment in their field based on a survey conducted by the College Placement Office during the fall semester of the year following graduation.	Of those responding to the college-wide occupational Follow-up survey, 100% reported full-time employment, 100% planned to transfer to a 4-year university and 100% felt they were successful in meeting their objectives.	We will work more closely with the Career Services office to find students CIM related jobs.
2	Employers of Computer Integrated Manufacturing Technology graduates will be satisfied with the education received by their employees.	75% of Computer Integrated Manufacturing Technology respondents to an employer survey conducted by the college will indicate that they are satisfied with the education and skills of their manufacturing technology employees.	Career Services did not complete an Employer Follow-up Survey this year.	We plan to go through the DACCUM process to continue to work with employers and keep curriculum updated and relevant.
3	Entry-level graduates with Associate of Applied Science degrees in Computer Integrated Manufacturing Technology will be able to:  Communicate effectively and professionally in the manufacturing environment through proper use of verbal, written and graphic techniques.	100% of graduating CIM students will create a Computer Integrated Manufacturing portfolio to showcase communications skills and document overall technical skills.	100% of graduating CIM students completed a Computer Integrated Manufacturing portfolio.	Review portfolios and improve content in the future.
3.1	Apply mathematical skills in algebra, trigonometry, and applied physics, using analytical problem solving methods.	90% of graduating CIM students will successfully complete a math project in Intro to CNC class which applies math to CNC related problems.	100% of graduating CIM students completed a math project in CNC class to demonstrate their ability to apply math to CNC problems.	Continue to have students demonstrate applied math skills.
3.2	Demonstrate the ability to develop and produce technical drawings and designs with a computer-aided drafting system.	90% of graduating CIM students will successfully complete a factory design project using a CAD system.	86% of graduating CIM students completed a factory design project using a CAD system.	Update and improve the guidelines for a factory design project, incorporate this project in the CIM class.
3.3	Demonstrate an ability to setup, operate and program computer numerical controlled machines and integrate with robotics and other automation.	90% of graduating CIM students will successfully complete a Computer Integrated Project using CNC machines, Robotics and other automation.	100% of graduating CIM students completed an integrated CNC robotics project.	Continue to have students demonstrate their ability to integrate automated equipment.

# Computer Technician

## Certificate

996

**Division:** Technology

**Created:** 1/10/2002 3:52:53 PM

**Revised:**

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the Computer Technician Certificate Program will be capable of being successfully employed in the field.	80% of Computer Technician Certificate graduates will report employment in a related field based on a survey conducted by the college Placement Office during the fall semester of the school year following graduation.		
2	Graduates of the Computer Technician Program will be technically proficient in the field of study.	80% of graduates who take the Comp TIA A+ test will pass on their first try.		

---

# Computer Technician

996

**Division:** Technology

**Created:** 1/10/2002 3:52:53 PM

**Revised:**

---

## Certificate

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

---

- 3 Employers of the C.T.C. Program graduates will be pleased with the education and skill level of their employees.
- Entry-level graduates with a Computer Technician Certificate will be able to:
- Communicate effectively and professionally in the manufacturing environment through proper use of verbal, written and graphic techniques.
- Apply mathematical skills in algebra, trigonometry, and applied physics, using analytical problem solving methods.
- Apply logical and concise problem solving techniques to technical problems.
- Demonstrate the ability to develop and produce electronic schematics.
- Describe and apply the fundamental concepts of Direct and Alternating current.
- Describe the theory and function of electronics components.
- Describe the principles of operating system software.
8. Demonstrate knowledge of computer hardware.
9. Demonstrate an ability to setup and operate computer systems.
10. Apply basic understanding of soldering tools and techniques.
11. Demonstrate the ability to setup and operate

---

# Computer Technician

996

**Division:** Technology

**Created:** 1/10/2002 3:52:53 PM

**Revised:**

---

## *Certificate*

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

electronics test equipment.

**Goal**

Provide career education including occupational, vocational, technical training for employment, advancement or career change

# Electronic Engineering Technology

086

**Division:** Technology

**Created:** 1/12/2002 1:25:32 PM

**Revised:**

*Associate in Applied Science*

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the Electronic Engineering Technology Program will be capable of being employed in the field.	80% of Electronic Engineering Technology graduates will report employment in a related field based on a survey conducted by the College Placement Office during the fall semester of the school year following graduation.	Of those responding to a college-wide occupational follow-up survey 100% reported full-time employment in their field of study. More job openings in this field are listed with the Career Planning and Placement than graduates. Graduates responding to the survey reported a higher average yearly income than the state average.	Continuation of program is indicated with minor revisions in course material to improve scores in organizational skills, problem solving, and oral and written communication.

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

- |   |  |   |
|---|--|---|
| 1 | Entry-level graduates with Associate of Applied Science degrees in Electrical Engineering Technology will be able to:                        | A) Student will write an article to be published complete with schematics, pictures and present it to the class.                |
|   | A) Communicate effectively and professionally in the manufacturing environment through proper use of verbal, written and graphic techniques. | B) Student will pass a written test with a 70% or better.   |
|   | B) Apply mathematical skills in algebra, trigonometry, and applied physics, using analytical problem solving methods.                        | C) Student will troubleshoot a system and detail the logic they will apply before they begin troubleshooting.                   |
|   | C) Apply logical and concise problem solving techniques to technical problems.   | D) Student will create Electronic schematics  |
|   | D) Demonstrate the ability to develop and produce electronic schematics.   | E) Student will build a DC power supply and create a technical paper on how each component operates.                            |
|   | E) Describe and apply the fundamental concepts of Direct and Alternating current.  | F) Students will describe and demonstrate the use of resistor, capacitor, BJT, Fet, Diode TTL Devices                           |
|   | F) Describe the theory and function of electronics components.   | G) Student will create a PLC program to safely operate a garage door.   |
|   | G) Demonstrate the principles of basic electricity and electronics in the control of automated equipment.                                    | H) Student will score C in computer hardware  |
|   | H) Demonstrate knowledge of computer hardware.   | I) Student will set up & operate a DVM; Oscilloscope, frequency generator.  |
|   | I) Demonstrate an ability to setup and operate electronic test equipment.  | J) Student will build a circuit and demonstrate proper tool, and solder procedures. Student will pass a written soldering test. |
|   | J) Apply basic understanding of soldering tools and techniques.  | K) Student will write a paper on RF and it's impact.  |
|   | K) Describe the principles of Radio Frequency electronics and its impact on society.   |   |

---

# Electronic Engineering Technology

086

**Division:** Technology

**Created:** 1/12/2002 1:25:32 PM

*Associate in Applied Science*

**Revised:**

---

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

---

- |   |  |   |   |
|---|--|---|---|
| 2 | Graduates of the E.E.T. Program will be technically proficient in their field of study.                        | 80% of all E.E.T. students who take the LLET examination pass their first attempt.  | 12% of students passed the CET exam.  |
| 3 | Employers of the E.E.T. program graduates will find their training to be adequate for the positions they fill. | Respondents to the employer survey conducted by Career Placement and Placement will rate graduates above average in all student characteristics categories. | Of those employers that responded to the survey graduates rated average or above average in all student characteristics categories. The three lowest rated categories were organizational skills 3.33, problem solving 3.33, and technical abilities 3.33 (1=Poor, 2=Average, 3=Good, 4=Superior) |

# Electronic System Specialist

Associate in Applied Science

096

**Division:** Technology

**Created:** 1/12/2002 1:21:27 PM

**Revised:**

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the Electronic System Specialist Program will be capable of being employed in the field.	80% of Electronic System Specialist graduates will report employment in a related field based on a survey conducted by the College Placement Office during the fall semester of the school year following graduation.		
2	Graduates of Electronic System Specialist will be technically proficient in their field of study.	80% of all Electronic System Specialist students who take the C.E.T. examination pass their first attempt.		
3	Employers of Electronic System Specialist graduates will find their training to be adequate for the positions	Respondents to the employer survey conducted by Career Placement and Placement will rate graduates above average in all student characteristics categories.		

# Electronic System Specialist

096

**Division:** Technology

**Created:** 1/12/2002 1:21:27 PM

**Revised:**

*Associate in Applied Science*

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

- 4 Entry-level graduates with Associate of Applied Science degrees in Electrical Engineering Technology will be able to:
- A) Communicate effectively and professionally in the manufacturing environment through proper use of verbal, written and graphic techniques.
  - B) Apply mathematical skills in algebra, trigonometry, and applied physics, using analytical problem solving methods.
  - C) Apply logical and concise problem solving techniques to technical problems.
  - D) Demonstrate the ability to develop and produce electronic schematics.
  - E) Describe and apply the fundamental concepts of Direct and Alternating current.
  - F) Describe the theory and function of electronics components.
  - G) Demonstrate the principles of basic electricity and electronics in the control of automated equipment.
  - H) Demonstrate knowledge of computer hardware.
  - I) Demonstrate an ability to setup and operate electronic test equipment.
  - J) Apply basic understanding of soldering tools and techniques.
  - K) Describe the principles of Radio Frequency electronics and its impact on society.
- A) Student will write, create, and present a technical paper complete with schematic, pictures, diagrams, etc.
  - B) Student will pass the LLCET math assessment with a score of 70% or better.
  - C) Student will troubleshoot a system and detail the logic they will apply before they begin taking measurements.
  - D) Student will create professional electronic schematics.
  - E) Students will build a DC power supply and create a technical paper on the purpose and function of each component.
  - F) Student will describe and demonstrate the use of resistors, capacitors, BJTs, FETs, Diodes.
  - G) Students will design, document, and build a circuit to safely operate a garage door. Students will design, document, and program a PLC program to safely operate a garage door.
  - H) Student will pass EET060 with a grade of "C" or better or pass the A+ exam.
  - I) Student will measure current, voltage, and resistance with a DVM. Student will accurately test a large value capacitor, resistors, Diode, and SCR with a DVM.

---

# Electronic System Specialist

096

**Division:** Technology

**Created:** 1/12/2002 1:21:27 PM

**Revised:**

---

*Associate in Applied Science*

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

Student will correctly setup a waveform generator. Student will correctly calibrate a scope probe to an oscilloscope. Student will correctly determine the frequency and voltage of a waveform.

K) Students will write a paper that describes the basics of Radio Frequency electronics and it's impact on society.

# Industrial Maintenance

932

**Division:** Technology

**Created:** 1/15/2002 1:14:18 PM

**Revised:** 5/6/2004

## Certificate

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	<p>Graduates of the Industrial Maintenance Program will be prepared to obtain employment in an Industrial Maintenance position.</p> <p>Graduates will be technically proficient in troubleshooting, repair and installation procedures.</p> <p>Employers of Industrial Maintenance students will be satisfied with the basic knowledge and skill level of our graduates.</p> <p>Graduates will:</p>			
1	Communicate effectively in an industrial environment through use of technical terms and techniques.	All graduating students will complete an oral presentation and written report related to maintenance.	83% of graduating students completed oral presentation and written report.	Encourage students to complete projects.
2	Apply mathematical skills related to an industrial environment.	90% of graduating students will complete a locally developed exam covering applications of shop computations.	92% of graduating students completed a locally developed exam.	Requirements met. No action required.
3	Demonstrate the ability to produce drawings and schematics for industrial projects.	90% of graduating students will complete a drafting project from idea to finished drawings.	100% of graduating students completed a drafting project from idea to finished drawings.	Requirements met. No action required.
4	Demonstrate the principles and mechanics of hydraulic and pneumatic flow associated with the repair and operation of industrial systems.	90% of graduating students will complete lab projects related to troubleshooting hydraulic systems.	92% of graduating students completed lab projects related to troubleshooting hydraulic systems.	Requirements met. No action required.
5	Demonstrate the principles of electrical flow and troubleshooting skills.	90% of graduating students will complete lab projects related to troubleshooting electrical systems.	100% of graduating students completed lab projects related to troubleshooting electrical systems.	Requirements met. No action required.

---

# Industrial Maintenance

932

**Division:** Technology

**Created:** 1/15/2002 1:14:18 PM

**Revised:** 5/6/2004

---

## Certificate

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

---

6	Demonstrate the principles of electrical installations related to both building and industrial applications.	90% of graduating students will successfully set up and operate electrical equipment.	100% of graduating students successfully set up and operated electrical equipment.	Requirements met. No action required.
7	Demonstrate safety procedures that apply to industrial applications.	90% of graduating students will complete projects showing competency in Industrial Safety rules and procedures.	100% of graduating students successfully completed projects showing competency in Industrial Safety rules and procedures.	Requirements met. No action required.

# Mechanical-Electrical Technology

064

**Division:** Technology

**Created:** 1/15/2002

*Associate in Applied Science*

**Revised:** 7/8/2003

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the Mechanical-Electrical Technology Program will be capable of successful employment in mechanical and/or electrical related jobs.	75% of Mechanical-Electrical Technology graduates will report successful employment in their field based on a survey conducted by the College Placement Office during the fall semester of the year following graduation.	A) Of those responding to a college-wide occupational follow-up survey 100% reported full-time employment in their field of study. (4 responses to follow-up survey).  B) More job openings in this career field are listed with the Placement Office than there are graduates.	Continuation of program would be indicated with minor revision of course material to keep current with industry practice.
2	Employers of Mechanical-Electrical Technology graduates within the College district will be satisfied with their performance.	75% of Mechanical-Electrical Technology respondents to an employer survey conducted by the College will indicate that they are satisfied with the education and skills of their mechanical-electrical employees.	Employer indicated above average satisfaction with the education and skills of their mechanical-electrical employees.	More emphasis on pairing graduates with job openings in this career field.
3	Entry-level graduates with Associates of Applied Science degrees in Mechanical-Electrical Technology will be able to:  Communicate effectively and professionally in the manufacturing environment through proper use of verbal and written techniques.	Student will complete an oral and written project #1 according to an assigned format while enrolled in Fluid Power. 75% percent of the students will achieve 80% or above on the project. Results will be analyzed at conclusion of Spring semester.	100% of graduating MET students met the criteria for oral and written communication skills.	Continue to have students demonstrate communication skills.
3.1	Apply mathematical skills in using analytical problem solving methods.	75% of the students will achieve 13 out of 18 total points on project #2 fluid power. Results will be analyzed at conclusion of Spring semester.	66% of graduating MET students met the criteria for applying mathematical skills to a fluid power project.	Encourage students to carefully file their notes during the semester so that they may easily find formulas needed for completing their final project. Also encourage students to start project at least a week before it's due.
3.2	Demonstrate the ability to develop and produce technical drawings and designs with a computer-aided drafting system.	75% of the students will achieve 80% of the available points on the technical drawing and design portion of the design project in Technical Mechanisms.	82% of the graduating MET students met the criteria for developing and producing drawings with a computer aided drafting system.	Provide more encouragement to students that are not completing or meeting the design project proposal deadlines.

---

# Mechanical-Electrical Technology

064

**Division:** Technology

**Created:** 1/15/2002

**Revised:** 7/8/2003

---

*Associate in Applied Science*

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

---

3.3 Understand the principles of fluid power in the control of automated manufacturing equipment.

90% of the students will achieve 4 or above on the method of fluid control. Discussion question included in project#2 Fluid Power.

100% of the graduating MET students met the criteria for understanding the principles of fluid power in the control of equipment.

Continue to have students demonstrate principles of fluid power control.

# Print Maintenance

Associate in Applied Science

065

**Division:** Technology

**Created:** 1/17/2002 2:21:58 PM

**Revised:**

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the Print Maintenance Program will be capable of being successfully employed in Printing Industry or related field.	75% of Print Maintenance Certificate graduates will report employment in a related field based on a survey conducted by the College Placement Office during the fall semester of the school year following graduation.		
2	Employers of the Print Maintenance Certificate program graduates will be satisfied with the training received by their employees.	Successful graduates will score at least 75% on student evaluations of course material and skills in field of major.		
3	Entry-level graduates with Associate of Applied Science degrees in Print Maintenance Technology will be able to:  Communicate effectively and professionally in the printing environment through proper use of verbal, written and graphic techniques.	75 % of respondents to an employer survey conducted by the college Placement Office will indicate that they are satisfied with the education and skills of their Print Maintenance employees.		
4	Apply basic mathematical skills using analytical problem solving methods.	Students will successfully complete Communications I or Composition I.		
5	Be proficient in the use of modern printing equipment to produce various media and concepts of quality control related to the print industry.	Students will successfully complete Tech. Math I, II, and III.		
6	Demonstrate the ability to troubleshoot DC and AC circuits.	Students will successfully complete Print Technology I and II.		
7	Demonstrate proper machining techniques.	Students will successfully complete Basic Electronics and Electric Circuit I.		
8		Students will successfully complete Intro to Machining.		

# Telecommunications

Associate in Applied Science

093

**Division:** Technology

**Created:** 1/17/2002 3:30:26 PM

**Revised:** 2/25/2003

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

#	Intended Outcomes and Objectives	Assessment Criteria and Procedures	Assessment Results	Use of Results
1	Graduates of the Telecommunication Program will be capable of being employed in the field.	80% of Telecommunications graduates will report employment in a related field based on a survey conducted by the College Placement Office during the fall semester of the school year following graduation.	No graduating students for Spring 2000.	Continuation of program is indicated with "major" revisions in course material to improve job placement.
2	Graduates of the Telecommunications Program will be technically proficient in their field of study.	80% of all Telecommunications students who take the FCC examination pass on their first attempt.	No graduating students for Spring 2000.	Program has been modified to improve Job Placement. There are currently no graduates from the modified program.
3	Employers of the Telecommunications program graduates will find their training to be adequate for the positions they fill.	Respondents to the employer survey conducted by Career Placement and Placement will rate graduates above average in all student characteristics categories.	No graduating students for Spring 2000.	Continuation of program is indicated with "major" revisions in course material to improve job placement.
4	Entry-level graduates with Associate of Applied Science degrees in Telecommunications will be able to:  Communicate effectively and professionally in the Telephony and WAN environments through proper use of verbal, written and graphic techniques.	80% of all students will pass Cisco 4 lab project "Threaded Case Studies" with a grade of "B" (80%) or higher.		
5	Apply electrical troubleshooting skills in the Telephony and WAN environments using analytical problem solving methods.	80% of all students will pass a hands-on trouble shooting lab exercise in TEL057 course.		
6	Demonstrate the ability to quantify transmission media through the use of test equipment.	80% of all students in TEL--- will pass a hands-on trouble shooting lab exercise using Bit Error Rate test equipment.		

---

# Telecommunications

093

**Division:** Technology

**Created:** 1/17/2002 3:30:26 PM

**Revised:** 2/25/2003

---

*Associate in Applied Science*

**Mission** Lake Land College creates and continuously improves an affordable, accessible, and effective learning environment for the lifelong

**Goal** Provide career education including occupational, vocational, technical training for employment, advancement or career change

---

- |    |   |   |
|----|---|---|
| 7  | Demonstrate the ability to setup and maintain Privatel Branch Exchange system (PBX).                        | 80% will pass a hands-on lab exercise in TEL058 setting up a working PBX system.  |
| 8  | Demonstrate the ability to splice copper and fiber optic cable.   | 80% of students will pass a hands-on lab exercise in EET062 where the student will splice both copper and fiber on a pass-or-fail test. |
| 9  | Demonstrate a thorough knowledge of different transmission package types, ATM, Frame Relay, SONET and VoIP. | 80% of students enrolled in TEL 058 and TEL 059 will pass the final test with a 80% or higher score.                                    |
| 10 | Demonstrate the ability to setup and maintain routers and switches utilizing WAN technology.                | 80% of all students will pass and receive their Cisco Certificate Network Administrator (CCNA) Certification.                           |