

TECH CRAFTSMAN CAREER BUILDING TRADE SCHOOL

CURRICULUM GUIDE for

AUTO BODY COLLISION REPAIR

TECHNOLOGY

2016

Interim Director, Proprietary School Certification
Missouri Department of Higher Education
PO Box 1469
Jefferson City, MO 65102-1469

Tech Craftsman Career Building Trade School

A Certified State of Missouri Proprietary School

- Trade School Certifications
- Associate/Bachelor Degrees : Advance Technology Career University

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ACKNOWLEDGMENTS

I, as the creator of Tech Craftsman Career Building Trade School (TCCBTS) designed to develop and offer needed careers to advance graduate interns in a lifelong job. Also creator of Advance Technology Career University designed for advanced graduate interns to move on and earn AA and Bachelor Degrees.

While I was planning, developing, and writing this curriculum for automotive technology I realized several more curriculum's need to be developed to fit all the other programs which in the future will be offered to fit several different fields.

I admit I begged and borrowed many of different published curriculums to put together this plan to be turned into over to the Interim Director, Proprietary School Certification Missouri Department of Higher Education. It was explained to me once turned over to higher education, then at any time once, directors, master, engine and transmission technicians are hired, then this curriculum can be revised.

I realized the final revised curriculum will require the coordinated efforts of many people involved in TCCBTS field of Automotive Technology. Automotive Technology will be the first program Tech Craftsman Career Building Trade School will offer on startup. Now TCCBTS is in a new phase, Automotive Body Collision Repair Technology, this too will be an exciting program and a high paying career.

Appreciation is expressed to the many Automotive Body Collision Repair experts who have worked in the automotive repair industry for decades, which now have years of experience and know what is lacking from instruction from community colleges or other automotive technology school which only instruct what's called, "Basic" knowledge. Those professionals who provided their assistance to the development of this document are greatly appreciated.

Tech Craftsman Career Building Trade School, has adopted Missouri NATEF Standards as the base document for instructional content in this curriculum. If for any revisions will be required in the future on this Automotive Technology Curriculum Guide it will be based on a Technical Committee set up by Tech Craftsman Career Building Trade School for review of the tasks in TCCBTS Instruction and a subsequent development of performance objectives by a writing team.

As President of TCCBTS, I reviewed several curricula's from different states, two such states as being Idaho and Florida. I adapted several parts from both states to fit Tech

Craftsman Career Building Trade School, including the State of Missouri's needs and requirements.

James E. Grow, President/CEO

INTRODUCTION

Degree Plan:

Trade School Certificate in Auto/Truck Collision Repair Technology

TCCBTS's goal is train auto body collision technicians, according to:

- “Career Planner” Excellent job opportunities are projected because of the large number of older workers who are expected to retire in the next 10 to 15 years.
- Repairers need good reading ability and basic mathematics and computer skills to use print and digital technical manuals.

Government Labor Statistics:

- Employment of automotive body and glass repairers is projected to grow 9 percent from 2014 to 2024, faster than the average for all occupations.
- While the frequency of accidents has declined in recent decades, an increase in the number of vehicles on the road should bolster demand for automotive body and glass repair over the next decade. In some cases, demand may fluctuate throughout the year due to the seasonality of inclement weather in some regions. The need for repair may be greater during the winter months in areas with snow and ice, for example, because these conditions increase the chance of accidents.

TCCBTS's 24 month, 8 hour days, 5 day week program will build master auto body collision and glass technicians to fill any job market.

Tech Craftsman Career Building Trade School's automotive collision repair technology certificate program is designed in conjunction with the automotive technology and the welding technology programs to produce a highly knowledgeable, start out as skilled entry level collision repair technician. This program covers all aspects of auto body repairs, glass, metalworking, plastic repairs, panel replacements, restoration, refinishing, custom refinishing, basic structural repairs, damage estimating, Interns/Apprentices' portfolio design and collision repair shop management.

TCCBTS program will follow the Automotive Service Excellence (ASE) and the National Automotive Technician Education Foundation (NATEF) curriculum standards. Upon completion of this program TCCBTS's interns/apprentices will receive a certificate and may be eligible to take the Automotive Service Excellence (ASE) certification test.

Since Tech Craftsman Career Building Trade School is a Missouri Proprietary School's being a “Trade School” and “University”. After completion of this certificate plan this

certificate can be applied toward the Associate of Applied Science Degree in Advance Technology Career University or a certificate in Trade School Technical Studies.

TCCBTS is using two different terms, "Internship" and "Apprenticeship" those two terms fit the many different programs we offer

✓ Internship: An internship is (a job) training for white collar and professional careers. Internships for professional careers are similar in some ways to apprenticeships for trade and vocational jobs. The Internship's lack of standardization and oversight leaves the term open to broad interpretation.

✓ Apprenticeship: A person who works for another in order to learn a trade

An applicant must have a high school education with a grade C or above or have completed an Intermediate Apprenticeship. Higher apprentices work towards work based learning qualifications such as an NVQ Level 4 and, in some cases, a knowledge based qualification such as a Foundation degree.

TCCBTS's goal is to turn out the best diesel technicians to be the pride of any industry they are employed.

Auto Body Collision Repair Technology

Tech Craftsman Career Building Trade School will offer auto body collision repair technology certificate. TCCBTS's program is designed in conjunction with the automotive technology and the welding technology programs to produce a highly knowledgeable and skilled level auto body collision repair technician. The program covers all aspects of auto body repairs, metalworking, plastic repairs, panel replacements, restoration, refinishing, custom refinishing, basic structural repairs, damage estimating, and all interns/apprentices portfolio design and auto body collision repair shop management.

The program follows the Automotive Service Excellence (ASE) and the National Automotive Technician Education Foundation (NATEF) curriculum standards. Upon completion of this 24 month, 8 hour days, 5 days a week program interns/apprentices will receive a certificate and may be eligible to take the Automotive Service Excellence (ASE) certification test. Interns/Apprentices will have the choice to enter into TCCBTS's partner Advance Technology Career University of degrees in AA Associate Arts, Associate in Science, Bachelor.

Completion of this certificate can be applied toward the Associate of Applied Science Degree in Vocational/Technical Studies.

Institutional Proficiency Requirements

In addition to the courses listed below for this program of study, interns/apprentices must also complete institutional proficiencies of ENG 25/30, MATH-Basic and READ 25/30 to meet all requirements before entering to TCCBTS's intern/apprentice program.

ENG 25/30 - Grammar Usage and Writing:

This course builds upon skills mastered in ENG 25/30. The course is designed for improving writing skills, with the focus on fluency and practice. The writing process - prewriting, organizing, drafting, editing and revising is emphasized. Prerequisites: ENG 25/30 and READ 25/30 or equivalent.

Note: This is a must in order to understand shop manual and to properly write up work order, which is a (Legal Document), and to communicate between shop instructors and team mates and most important, the auto body repair shop's customers.

TCCBTS understand high school and college graduates will have the required following courses, but all will be tested on the basic courses, if need be, refresher courses will be available, besides each classroom will actually be a refresher class.

MATH-Basic - General Mathematics

This course will cover skills/concepts of arithmetic with an introduction to basic algebra for interns/apprentices needing to strengthen their basic mathematical background. Emphasis will be placed on ratios, proportions, percent's, measurement, graphs, geometric concepts, real number systems concepts, metric measurements, signed numbers, and linear equations in one variable, including reading measurement instruments to measure cylinder wall and crankshafts/camshafts to bring them back to manufacturers specifications.

Tech Craftsman Career Building Trade School: **Courses Abbreviations**

- ❖ CRT - COLLISION REPAIR TECHNOLOGY
- ❖ AUTO – Automotive
- ❖ STEM - Science, Technology, Engineering and Mathematics
- ❖ WLED - Welding

Certificate Requirements -

36 Credit Hours

Startup Program

(33 hours)

100 -Automotive Fundamentals	4
154 -Steering and Suspension	4
100 -Introduction to Collision Repair	3
105 -Introductions to Refinishing	3
110 -Collision Repair Shop Management	3
115 -Metal Working	3
120 - Collision Repair II	3
125 - Refinishing II	3
130 - Auto Restoration and Customizing	3
140 - Estimation for Collision Repair	3
295 - CRT Capstone	1
Approved Electives (3 hours)	
AUTO-104 Electrical and Electronic Systems I	5
CRT-135 Introduction to Airbrushing	3
STEM-105 Computer Use for Technology	3
WLED-105 Introduction to Welding	3

AUTO 100 - Automotive Fundamentals

Program Overview

The Automotive Fundamentals Certificate/Diploma program is a sequence of courses designed to prepare interns/apprentices for careers in the automotive service and repair profession. Learning opportunities enable interns/apprentices to develop academic, technical and professional knowledge and skills required for job acquisition, retention, and advancement. The program emphasizes a combination of automotive mechanics theory and practical application necessary for successful employment. Program graduates receive an Automotive Fundamentals diploma that qualifies them as entry-level technicians.

This course provides the foundation of automotive technology with basic engine theory and operation. Includes lubrication and cooling systems, standards for safety and shop operations, also covers tools and supplies used in the industry. Maintenance procedures and schedules are also covered along with diagnostic concepts. TCCBTS's information systems both printed and computer based. Industry opportunities and trends are covered along with customer service and professionalism. Practical applications are covered.

Learning Objectives:

- Interns/Apprentices will take and pass safety tests; interns/apprentices will learn and comprehend the colors pertaining to OSHA.
- Interns/Apprentices must explain how to properly use equipment in the Auto Body Collision Shop.
- Interns/Apprentices identify the different subsystems in the Automobile.
- Interns/Apprentices must identify ASE (Automotive Service Excellence) tests needed to become certified in any of the 8 areas.

- Interns/Apprentices must identify hand tools, and power tools used and how to properly use them.
- Interns/Apprentices must describe how to properly fill out work orders (Legal Document) and how to use the different types of diagnostic charts.
- Interns/Apprentices must recognize electrical and electronic circuits in the Automobile
- Interns/Apprentices must identify bolts, and know how to make and repair threads.
- Interns/Apprentices must properly check fluids, know the importance of maintenance, and how to perform an oil change.

Additional Learning Outcomes

- ✓ Interns/Apprentices will take and pass all safety tests with 100%
- ✓ Interns/Apprentices will know the components of subsystems of a vehicle
- ✓ Interns/Apprentices will use hand tools and power tools properly
- ✓ Interns/Apprentices will make a jumper wire and will know how to use the jumper wire
- ✓ Interns/Apprentices will be able to identify bolts and know how to make threads in metal for the bolts

AUTO 104 -Electrical and Electronic Systems I

Program Overview

This certificate program provides interns/apprentices with the knowledge and skills necessary to diagnose, service, and repair basic electrical/electronic automotive systems as an entry level technician. Topics covered include automotive shop safety, electrical theory and circuit diagnosis, automotive batteries, starting and charging systems, instrumentation, lighting, and various vehicle accessories.

This course covers basic automotive electricity, electronics fundamentals, theory and applications for automotive circuits. This course will also cover diagnosis and repair of electrical systems and schematic study. Battery, starting and charging systems are specifically studied in this course.

Corequisite: AUTO-100: This is an academic course required to be taken in conjunction with another course.

This course provides the foundation of automotive technology with basic engine theory and operation. Includes lubrication and cooling systems, standards for safety and shop operations, also covers tools and supplies used in the industry. Maintenance procedures and schedules are also covered along with diagnostic concepts. Use of information systems, both printed and computer based, is covered. Industry opportunities and trends are covered along with customer service and professionalism. Practical applications are covered.

Learning Objectives:

- ✓ Interns/Apprentices will know how to compare voltage, current, and resistance. Will also know how to perform fundamental electrical tests.
- ✓ Interns/Apprentices will visually inspect battery, perform basic battery test, safety practices of battery removal, installation, and proper procedure for jumping a battery.
- ✓ Interns/Apprentices will describe the safety practices that should be followed when diagnosing, testing, and repairing a starter motor. Adjust a neutral safety switch.
- ✓ Interns/Apprentices will inspect, diagnose, remove, and repair charging system components properly and safely.
- ✓ Interns/Apprentices will properly inspect, diagnose, and repair ignition system components.

Additional Learning Outcomes

- Interns/Apprentices will know how to use a multimeter to perform basic electrical tests
- Interns/Apprentices will perform a battery inspection and procedures for battery replacement
- Interns/Apprentices will properly disassemble and reassemble a starter
- Interns/Apprentices will properly remove and replace an alternator
- Interns/Apprentices will know how to test electrical components

AUTO 154 - Steering and Suspension

Program Overview

Classroom and lab experiences integrate technical and academic course work. Emphasis is placed on theory, servicing and operation of brakes, electrical/electronic systems, engine performance, steering/suspension, automatic transmission/ transaxles, engine repair, climate control and manual drive trains.

This course will provide a foundation to the automotive chassis system, including the fundamentals of the chassis system. The course includes theory, inspecting and diagnosing practices with an emphasis on safety, along with the repair procedures and specific equipment operation. Alignment procedures will also be covered.

Corequisite: AUTO-100: This is an academic course required to be taken in conjunction with another course.

Learning Objectives:

- Interns/Apprentices will identify the parts of a tire and wheel.
- Interns/Apprentices will identify and describe the major parts of a suspension system.
- Interns/Apprentices will diagnose problems relating to a suspension system.
- Interns/Apprentices will compare the differences between a linkage steering and a rack and pinion steering system.
- Interns/Apprentices will describe caster, camber, and toe adjustment.

Additional Learning Outcomes

- ✓ Interns/Apprentices will know how to properly mount and dismount tires
- ✓ Interns/Apprentices will know how to properly inspect and replace shocks and struts
- ✓ Interns/Apprentices will know how to properly inspect and replace suspension components
- ✓ Interns/Apprentices will know how to inspect and replace a rack and pinion steering
- ✓ Interns/Apprentices will know how to perform an alignment

CRT 100 - Introduction to Collision Repair

Program Overview

This Program is a sequence of courses designed to prepare TCCBTS's interns/apprentices for careers in the automotive collision repair profession. Learning opportunities develop academic, technical and professional knowledge and skills required for job acquisition, retention, and advancement. The program emphasizes either major automotive collision repair or automotive collision repair or automotive painting and refinishing depending on the specialization area a interns/apprentices chooses to complete. Program graduates receive an Automotive Collision Repair diploma which qualifies them as major collision repair technicians or painting and refinishing technicians. Graduates of the Automotive Collision Repair Diploma program will also receive technical certificates of credit in Automotive Collision Repair Assistant I and Heating and Automotive Collision Repair Assistant II.

This is an introductory course covering the basics of Auto Body Repair including safety orientation, hand tools, power tools, equipment, basic metal straightening, and surface preparation.

Learning Objectives:

- ✓ Interns/Apprentices will learn Body Shop safety
- ✓ Interns/Apprentices will learn to repair dents properly using body fillers.
- ✓ Interns/Apprentices will learn to properly use the tools of the trade.
- ✓ Interns/Apprentices interns/apprentices will learn about metal preparation.
- ✓ Interns/Apprentices will learn how to properly straighten metal.
- ✓ Interns/Apprentices will learn about proper sanding techniques.
- ✓ Interns/Apprentices will learn about the different grits of sand papers, wet or dry, grinding discs, etc.
- ✓ Interns/Apprentices will learn the basics of a collision, whether to determine if it's direct or indirect damage.

Additional Course Learning Outcomes (Competencies)

- Interns/Apprentices will learn to repair minor dents and to perform proper surface preparation
- Interns/Apprentices Master proper usage of the tools of the trade, tool safety, body fillers and plastic repair.
- Interns/Apprentices need to understand the proper techniques of sanding and stripping techniques.

CRT 105 - Introduction to Refinishing

This course is an Introduction to Auto Refinishing. The course covers refinishing safety, refinishing equipment, refinishing products, proper use of equipment and refinishing techniques.

Additional Learning Objectives:

- ✓ Interns/Apprentices will demonstrate shop safety.
- ✓ Interns/Apprentices must exhibit refinishing safety.
- ✓ Interns/Apprentices will demonstrate proper use of refinishing equipment.
- ✓ Interns/Apprentices will have the ability and skills of automotive refinishing.
- ✓ Interns/Apprentices will touch on various use of refinishing products.

CRT 110 - Collision Repair Shop Management

Program Overview

Initiates written estimates on damaged vehicles. Interns/Apprentices learn shop management, including work orders, ordering supplies, operating costs, time cards, shop liabilities, employee safety, and insurance management issues.

This course will cover a shop layout, shop policies, shop maintenance, collision repair estimating, business cost and profits and customer service. Each interns/apprentices will design their own shop plans.

Learning Objectives:

- Interns/Apprentices will learn Body Shop safety.
- Interns/Apprentices will learn how to make a shop layout as if it was their own shop or business.
- Interns/Apprentices will learn about costs and profits.
- Interns/Apprentices will learn about labor times.
- Interns/Apprentices will learn shop maintenance skills.
- Interns/Apprentices will learn about profit management skills.
- Most importantly, interns/apprentices will learn about customer service.
- Course Learning Outcomes (Competencies)
- Professionalism skills, management skills, advertising skills, actual collision shop
- Observation, planning skills.
- Course Learning Outcomes (Competencies)

- Interns/Apprentices will learn Refinishing safety.
- Interns/Apprentices will learn to use refinishing equipment.
- Interns/Apprentices will learn refinishing techniques.
- Interns/Apprentices will learn to use Refinishing products.

CRT115: Metalworking

Program Overview

Instruction includes classroom and hands-on work. Interns/apprentices get the chance to perfect their welding skills and learn how to use different materials to create desired outcomes. Topics covered in a program may include these:

This course will cover metal working in the collision repair field, metal types and various metal working techniques will be covered, practical hands-on applications.

Learning Objectives:

- ✓ Interns/Apprentices will demonstrate shop safety.
- ✓ Interns/Apprentices will have the ability to identify all types of metals.
- ✓ Interns/Apprentices will demonstrate how to stretch metal, shrink metal and form metal.
- ✓ Interns/Apprentices will have the knowledge of metal working tools and equipment.
- ✓ Interns/Apprentices will become familiar with mig welding techniques.
- ✓ Course Learning Outcomes (Competencies)
- ✓ Interns/Apprentices will learn metal forming, shaping and bending, metal safety, metal tools and equipment safety, hands-on practical application.

Additional Learning Objectives:

- Hand tools
- Drilling machines
- Blueprint reading
- Measurements for metal working
- Milling machines
- Computerized methods in welding

CRT 120 - Collision Repair II

A continuation course to the Intro to Collision Repair, this course is an in-depth study of collision repair featuring body fillers, panel replacement, and

non-structural repairs, plastic repairs. Practical hands on applications are included in this course.

Learning Objectives

- ✓ Interns/Apprentices must demonstrate advanced auto body straightening techniques.
- ✓ Proper selection and use of auto body fillers must be demonstrated.
- ✓ Auto body replacement panel fitment techniques will be implemented.
- ✓ Industry standard Auto Body welding techniques must be performed.
- ✓ Proper use of advanced auto body tools must be demonstrated.
- ✓ Knowledge of ASE standards, industry standards are required.

Course Learning Outcomes (Competencies)

- Interns/Apprentices will learn to use proper straightening techniques.
- Make proper panel replacements.
- Learn proper auto body basic welding techniques.
- Learn to use advanced auto body tools and equipment properly.
- Interns/Apprentices will learn to weld safely.

CRT 125 - Refinishing II

This course is a full in-depth study of refinishing featuring pain preparation, block sanding, spray booth management, masking, paint mixing, color matching, color sanding, buffing and undercoating.

Learning Objectives

- ✓ Interns/Apprentices must demonstrate proper block and color sanding techniques.
- ✓ Interns/Apprentices must exhibit spray booth management skills.
- ✓ Pain mixing and color matching techniques must be demonstrated.
- ✓ Automotive pain surface preparation procedures must be properly executed.
- ✓ Professional final paint application techniques must be demonstrated.
- ✓ Proper paint buffing skills must be demonstrated.
- ✓ Paint product selection, handling and disposal will be done in accordance to local and national standards.

Course Learning Outcomes (Competencies)

- Interns/Apprentices will learn proper spray booth management and maintenance.
- Interns/Apprentices will learn block sanding and masking techniques.
- Interns/Apprentices will learn paint product management.
- Interns/Apprentices will learn color management.
- Interns/Apprentices will learn to finalize a refinishing job.

CRT 130 - Auto Restoration and Customizing

This course is an advanced class featuring auto project management, custom body panel's fabrication, lead bodywork, metal shrinking, custom interior and exterior modifications, and custom painting, practical hands-on experience. Each interns/apprentices will create his or her own project portfolio.

Learning Objectives:

- ✓ Interns/Apprentices must demonstrate the ability to successfully plan and organize an auto restoration project.
- ✓ Automotive fasteners must be properly identified, organized and labeled.
- ✓ All Interns/Apprentices will create a project portfolio.
- ✓ All custom paint designs will be drawn out and planned before pain application.
- ✓ Interns/Apprentices must keep accurate records of all project expenses.

Course Learning Outcomes (Competencies)

- Properly planning and organizing an auto restoration project, designing and fabricating custom body panels, designing a custom paint job and creating a auto restoration project portfolio

CRT 135 - Introduction to Airbrushing

Course Description:

The Introductory course provides the interns/apprentices with the basic skills and techniques of painting with an airbrush.

Learning Objectives:

- ✓ Interns/Apprentices will learn Airbrush history.
- ✓ Interns/Apprentices will learn terminology.
- ✓ Interns/Apprentices will learn basic graphics.

- ✓ Interns/Apprentices will learn layout and transfer design.
- ✓ Course will give the experienced users the ability to enhance their skills.

Course Learning Outcomes (Competencies)

Interns/Apprentices will become familiar with professionalism and airbrushing skills for beginners and the more experienced.

CRT 140 - Estimation for Collision Repair

This course will cover methods and procedures involved in estimating of collision damage to automobiles.

Learning Objectives:

- ✓ Interns/Apprentices will be able to make proper estimations of collision damage.
- ✓ Interns/Apprentices will be able to make visual inspections of collision damage.
- ✓ Interns/Apprentices will be able to record estimating information.
- ✓ Interns/Apprentices will be able to estimate costs and profits

Course Learning Outcomes (Competencies)

- Interns/Apprentices will be able to make proper estimations of collision damage.
- Interns/Apprentices will be able to make visual inspections of collision damage.
- Interns/Apprentices will be able to record estimating information.
- Interns/Apprentices will be able to estimate costs and profits.

CRT 295 - CRT Capstone

This course is for interns/apprentices in their final semester of the collision repair technology program and will prepare the interns/apprentices to take the comprehensive examination. Information/content will come from the core curriculum/program requirements. Study guides, pre-tests, and group sessions will be utilized.

Interns/Apprentices must also submit a portfolio consisting of coursework completed throughout the core program. A sample automotive service excellence (ASE) test will also be taken.

Learning Objectives:

- ✓ The knowledge and experience learned in the collision repair program must be demonstrated.
- ✓ Proficiency in the collision repair program will be tested.
- ✓ Portfolio and hands-on demonstrations will exhibit skills learned in collision repair program.

Course Learning Outcomes (Competencies)

- Interns/Apprentices will complete the Automotive Collision Repair Technology Program.
- Interns/Apprentices will be at an entry level Collision Repair Technician.
- Interns/Apprentices will be prepare for employment in the Automotive Collision Repair industry

SMET 105 - Computer Use for Technology

This course is the study of the fundamentals of computer technology software used in engineering technology fields. Emphasis will be placed on technical and scientific computer applications. Topics to be covered will include an introduction to computer concepts, Windows, Microsoft Word, Excel, Access, and PowerPoint, and other specific software applications used to interface various engineering technologies fields.

Course Objectives:

- ✓ The objective of the course is to provide interns/apprentices with the computer basics for success in the STEM disciplines. Interns/Apprentices will become proficient at basic Microsoft programs and will be introduced to AutoCAD software.

Learning Outcomes: upon completion of the course with a grade of “C” (70%) or better, interns/apprentices will be able to:

- Demonstrate a knowledge of the course content through quizzes, projects, and exams
- Apply the concepts learned in class to unit projects
- Demonstrate a working knowledge of both Microsoft and AutoCAD software
- Demonstrate a working knowledge of hardware and components

WELD105 - Introduction to Welding

This course teaches the fundamentals in the welding processes, shop orientation, and shop safety.

Start with oxy/acetylene cutting and welding, and advance into basic MIG,TIG, and stick welding. Plasma cutting will be introduced. Welding will be tested in the flat, horizontal, vertical and overhead positions. Practical applications are covered and pipe welding will be introduced.

Learning Outcomes:

1. Identify some of the common hazards in welding.
2. Explain and identify proper personal protection used in welding.
3. Describe how to avoid welding fumes.
4. Explain some of the causes of welding accidents.
5. Identify and explain uses for material data safety sheets
6. Explain safety techniques for storing and handling bottles.
7. Explain how avoid electrical shock while welding.
8. Identify and explain the use of oxy/fuel cutting equipment.
9. Set up oxy/fuel equipment.
10. Light and adjust an oxy/fuel torch.
11. Proper shut down of bottles.
12. Change cylinders
13. Perform oxy/fuel cutting and welding procedures.

Assessment

Luna Community College defines assessment as a process that will lead to the improvement of interns/apprentices learning. The process must follow four steps as illustrated below.

TCCBTS Assessment Plan

All course offerings, including degree and certificate programs, at Luna Community College are required to follow the four-step assessment process. They include:

1. A list of expected learning outcomes
2. Assessment tools that directly measure those learning outcomes
3. The results of the data, and
4. How the data will be used to improve interns/apprentices learning

Academic Departments at Tech Craftsman Career Building Trade School is required to participate in semester “Improving Interns/Apprentices Learning” assessment reporting and interns/apprentices Interns/Apprentices’ Learning Outcomes Assessment (SLOA) Committee presentations. Every 12 month semester, which are two semesters, each making up 12 months each, academic departments focus on specific learning outcomes with a targeted interns/apprentices population. Faculties are selected to participate in SLOA; selected faculties participate in developing assessment methods and procedures for their particular course or courses. The faculties give oral presentations at the end of the semester and information gathered is disseminated among SLOA members, faculty and staff. The purpose is to provide a baseline for future improvements.

Tech Craftsman Career Building Trade School

TCCBTS Standard “Minimal” Requirements for Course Syllabus

Course

Course title and other course information including meeting times, dates, room number, credits, semester, prerequisites and/or co-requisites

Faculty

Information about the instructor their contact information, such as phone number and email. List time and day of office hours for full time faculty

Course Description

Use catalog description

Expectations of Interns/Apprentices

What do you expect from your interns/apprentices? For example, description of interns/apprentices responsibilities in the learning process; how you hope the interns/apprentices will approach the course subject/content; take responsibility for their learning; the amount of study time expected in the course, and suggestions on how to succeed in the course.

Course Learning Outcomes (Competencies)

This section will include a list of skills or techniques interns/apprentices will develop from the course. This list will consist of a minimum of four to six quantifiable statements about what interns/apprentices will be able to do after completing the course.

Methods of Measuring Learning

What tools are used to measure interns/apprentices Outcomes (Competencies) success based on the learning outcomes? Evaluation Indicate how the interns/apprentices will earn a particular grade, such as information about assignments including types of assignments, nature of exams (e.g., take home, open book, in-class) due dates, grading criteria and so forth.

Course Schedule

Add a tentative schedule indicating the course content that will be covered throughout the course (e.g., eight week or sixteen week schedule).

Policies

Include policies such as attendance, academic responsibilities, late assignments, missed exams, cell phones, etc.

Textbook(s)

Name of required textbooks(s) and any recommended materials. Include ISBN number(s)

Important Dates

List important dates such as last day to withdraw from the course, holidays, add/drop, midterm, final exam week, spring break and other important dates.

ADA Statement

Add a statement regarding accommodations for interns/apprentices with disabilities

Syllabus Revisions or Changes

Add a statement that indicates the syllabus is subject to change Internet Courses (non-proctored) Use the following statement: TCCBTS will ensure firm interns/apprentices identification for examinations through the use of username and password for non-proctored exams. As on-line interns/apprentices, you are responsible for keeping your username and password secure. Your username and password should not be given out as you are responsible for all assessment, assignments, and on-line communications. Any academic dishonesty/plagiarism will not be tolerated and is grounds for disciplinary actions.