Auburn Career Center

Attitude – Respect – Responsibility

Welding

2022-2023 Syllabus

Building Location: Main Building

Room Number: 9B

Instructor Name: Mr. Jared Rogge

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Welcome

Auburn Career Center's Mission

Auburn Career Center provides an innovative career and technical education that empowers all learners to excel in the emerging workplace and enrich their community.

Auburn Career Center's Core Values

We believe that:

- People are personally responsible for their choices and actions
- Treating people with dignity and respect will enhance learning
- Attitude and goals drive achievement
- All people can learn
- All people can make positive contributions
- Change is exciting and essential for growth

Course Schedule

First Year Schedule: 8:15am to 10:53am
Second Year Schedule: 11:00am to 2:28pm

Course Credits:

Articulation Agreement ***Welding (Industrial Welding)***

Specific courses for which the student is eligible to receive credit

Course ID	Course Title	Credit by Semester
WELD 1220	Oxyfuel Gas Welding	2
WELD 1240	Stick Welding	2
WELD 1260	MIG,TIG and Flux-Cored Arc Welding	6

Students who successfully complete the Welding program and meet the requirements listed in 1-5 will receive Lakeland Community College articulation credits for courses listed above which apply toward the Associate of Technical Studies of Degree Engineering Technologies and/or any other engineering technologies degree programs or certificate programs, where these course credits are accepted as articulated credits.

Course Materials

Uniform Shirts: $49.00 - $57.00 for two shirts
Welding Jacket: $44.00-$53.00 (price varies for size)
Class Fee: $25.00
All fees are due by October 31, 2022. Fees will be waived for students who qualify for free and reduced meals. Accounts will be adjusted after the approval of free/reduced meal applications.

Student Kits/Tools

Tool kits will be provided for students to use during their two year career and technical training and will be in the classrooms on the first day of school. Students will sign an inventory sheet listing all items received and are to turn in all tools when finished at Auburn. Fees will be assessed for any missing items.

2022-2023 STUDENT TOOL LIST

16" Steel Tool Box
Master Lock
0-1" Micrometer
Clear Safety Glasses
7" Curved Jaw Locking Piers
Carbide Pt Scriber
12'x1/2" Tape Measure
Chipping Hammer
10" Half Rd Bastard File w/Handle
Spark Lighter & Flint
Stainless Steel Welder's Brush (2ea) $1.99ea
Show Handle Wire Brush
Welding Magnet
1/8-1" Fillet Gage
Hand Held Calculator
Soapstone w/holder
Welding Helmet
Flip Front Burning Goggle #5 Shade
#5 Glass Filter Plate (2ea) $1.60ea
Clear Safety Plate (2ea) $.45ea
Premium Leather Welding Glove
Welder's Skull Cap
MIG Welding Pliers
White TIG Welding Glove

Program Scope:

First Year Course(s) Description/Outcomes:

Shielded Metal Arc Welding

Description: Students will be able to safely use the Shielded Metal Arc Welding process (SMAW) to join various types of metal. They will perform multiple types of welds in all positions up to overhead. They will select the appropriate type of electrode and adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate the quality of welds.

Gas Metal Arc Welding

Students will safely use the Gas Metal Arc Welding process (GMAW) to join various types of metal. They will cut metals using oxy-fuel processes and perform multiple types of welds in all positions up to overhead. They will select the appropriate type of electrode and shielding gas and adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate weld quality.

Second Year Course(s) Descriptions/Outcomes:

Flux Core Arc Welding

Description: Students will be able to safely use the Flux Core Arc Welding process (FCAW) to join various types of metal. They will perform multiple types of welds in all positions up to overhead. They will select the appropriate type of cored electrode and adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate the quality of welds.

Gas Tungsten Arc Welding

Description: Students will safely use the Gas Tungsten Arc Welding process (GTAW) to join various types of metal. They will perform multiple types of welds in all positions up to overhead. They will select the appropriate type of electrode, filler metal and shielding gas and be able to adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate weld quality.

First Year Sequence

1) Welding safety
   a) OSHA
   b) Shop safety
   c) Safety meetings
   d) Shop clean up
2) Oxy-fuel cutting.
   a) Hand cutting
   b) Hand beveling
   c) Semi-automated cutting
3) Plasma arc cutting
   a) Hand cutting
   b) Hand beveling
   c) CNC programed cutting
4) Shielded metal arc welding(SMAW)
   a) SMAW principles
   b) 7024 flat and horizontal
   c) 7018 all positions
   d) 6010 all positions
   e) 6011 all positions
   f) 6013 all positions
5) Gas metal arc welding(GMAW)
   a) GMAW principle's
   b) ER70S-6 all positions
   c) Spray transfer all positions
   d) Pulse all positions
   e) Globular transfer
6) Fabrication
   a) Fit up
   b) Grinding
   c) Fitting
   d) Preparation
   e) Small projects
7) Metallurgy
   a) Spark test
   b) Molecular make up
8) Certifications

Second Year Sequence

1) Gas tungsten welding (GTAW)
   a) GTAW principles
   b) Carbon steel all positions
   c) Stainless steel all positions
   d) Aluminum all positions
   e) Cast iron
2) Blue prints
   a) Alphabet of lines
   b) Views
   c) Welding Symbols
3) Flux core arc welding (FCAW)
   a) FCAW principle's
   b) Carbon steel all positions
4) Air carbon arc gouging
5) Pipe welding
   a) GTAW 6G
   b) SMAW 6G
6) Advanced fabrications
   a) In depth blue prints
   b) Advanced welding symbols
   c) Larger projects
7) Metallurgy
   a) Physics of steel
8) Certifications

Auburn Certificates

Auburn Career Center provides an extended curriculum for our eleven participating school districts. Students attending Auburn Career Center may earn multiple elective and academic credits each year. Following successful completion, these credits are certified by the high school in which the student is enrolled. High school students can also earn several college credits while attending Auburn Career Center.

In addition to earning academic credit toward graduation, students may earn the following certificates of achievement from Auburn Career Center:

- Honors
- Distinction
- Merit
- Completion

These certificates are placed in the student's senior porfolio, then awarded at the Auburn Completion Ceremony.

See APPENDIX for additional information on certificates

Instructional Philosophy

Instruction is delivered through a variety of instruction including: lecture based, online/internet based, hands-on labs, student center inquiry based learning.

Assessment Plan

Evaluation Criteria	Method of Evaluation	Percent
Daily Grade	Safety, Team Work, Welding Performance, Class Participation, and Employability Skills	20%
Theory	Quizzes	5%
	Tests	60%
Homework/Lab Work/Completion		15%

Grading Scale

Grades for the course will be based on the following levels of performance:

Grade		Performance Standard
A	90-100	Independent Learner- Student is able to successfully construct a project or demonstrate a skill with no assistance from the instructor. Student is also willing to help others when needed.
B	80-89	Semi-Independent Learner-Student is able to successfully construct a project or demonstrate a skill with little assistance from the Instructor.
C	70-79	Dependent Learner- Student is able to successfully construct a project or demonstrate a skill with moderate assistance from the Instructor.
D	60-69	Very Dependent Learner- Student is able to construct a project and/or demonstrate a skill with considerable coaching and assistance from the Instructor.
F	59 and below	Unsuccessful- Student is unable to complete projects or demonstrate skills even with consistent coaching and assistance of the Instructor.

Grading Policies

You must maintain a passing grade in Lab & Related in order to pass nine week grading periods. A “F” in either Lab or Related for a nine week grading period will result in a failing grade for the grade period.

Industry standards require an employee to be punctual and dress in proper attire and ready to work at the prescribed starting time and to perform his or her job to industry standards. In most industries, you are required to have a license or some other certification in order to maintain your job position. Therefore, you will need to participate in continuing education to learn new skills in keeping up with technology. This rationale must be adhered to in order to improve teaching in the classroom or the effects on student learning will be minimal.

Employability Skills

Welding students have the opportunity to earn points in class each day. The points include points for employability skills. It is up to the student to earn the grade. Not earning points can be based on inappropriate behavior and teacher observations of behavior and attitude. Behavior and preparedness are an essential part of a student’s tenure at Auburn.

To earn employability points in class, students are to:

- ✓ Speak/Think Positively – Utilize outstanding communication skills
- ✓ Keeping excellent attendance – Be dressed and ready for class
- ✓ Follow Directions – Use computers, calculators or mobile devices in an appropriate manner
- ✓ Be a Team Player - Have tolerance, respect, and concern for others
- ✓ Demonstrate Excellent Work Ethic – Be in class, on time, ready to begin, focused on task at hand
- ✓ Uphold a Safe Environment - Operate and maintain equipment properly

Continual violation of the Employability Skills will result in a reduced course grade. Continuous violation of the Employability Skills will result in additional disciplinary action determined on a case-by-case basis.

Course Assignments, Labs and Projects

Each student will be required to:

1. Take exams at the end of each chapter.
2. Take daily/weekly quizzes, oral or written.
3. Complete daily assignments.
4. Complete hands-on test assigned each week.

Course Policies

●This course covers a large amount of material; therefore, late assignments will not be accepted. The only exception to this is if the student provides an excused absence that is verified by the High School Office. Refer to the Student/Parent Code of Conduct for more information.

●This program is a program that builds upon skills. Missing class time will jeopardize a student's ability to complete the various assignments and projects accurately and on time.

●Class participation and employability skills are an extremely important part of this program. Grades are based in part on the criteria outlined in the Employability Skills Criteria.

Attendance

Attendance is taken at the start of class. All students should be in their assigned seat before the bell. Students not in their seats will be counted tardy or absent if not present. If you are tardy you must report to the Main Office and obtain an admit slip. **Excessive unexcused absences may result in disciplinary action.** Refer to the Student/Parent Handbook for more information.

Safety

GENERAL SAFETY RULES

1. Safety glasses must be worn at all times in the lab.
2. No horse play of any kind will be tolerated and will result in an immediate removal from the lab.

3. Do not leave lab or class room area without permission.
4. Do not throw anything.
5. Do not operate or touch any equipment until approved to by Mr. Rogge.
6. Do not use that piece of equipment for anything other than what you are approved for.
7. No boisterous conduct.
8. Safety toed boots must be worn in the lab area.
   Ear plugs or muffs must be worn in the lab.
9. All PPE must be worn in lab area.
10. No projects or other welding operations are permitted without Mr. Rogge's approval.
11. Any student observing anything that looks unsafe or is a safety violation must report it to Mr. Rogge **immediately.**
12. No student is to be anywhere in the lab or classroom that they were not instructed to be.

Emergency Response

If there is an emergency in the lab or class room, inform the instructor. If the emergency involves the instructor, contact the main office by using the telephone in the Instructors office.

Pick up the phone and dial "0" for the Main Office.

Remain calm, explain the situation.

If there is no immediate answer send someone to the nearest classroom or office and notify an adult of the incident and request additional help by calling 911.

If the victim is conscious, it is best to have them lie still until qualified emergency response personnel arrive on the scene. Do not move a victim unless there is risk of additional immediate danger to them and you. You can cause additional severe injury by unnecessarily moving a victim.

There is the possibility of the victim going into a state of physiological shock -- a condition of insufficient blood circulation different from electrical shock -- and so they should be kept as warm and as comfortable as possible.

Program Apparel

Students will be required to wear program specific apparel.

- Welding jackets
- Steel-toe work shoes
- Full length pants
- Program shirt
- Safety glasses

Classroom Entry – Attendance

- Attendance is taken at the start of class. All students should be in their assigned seat before the bell. Students not in their seats will be counted tardy or absent if not present. If you are tardy you must report to the Main Office and obtain an admit slip.

Classroom Exit – Dismissal

- The last fifteen minutes of the lab will be allotted for lab clean-up.
- Lab foreman will signal shut down.
- Foreman will shut down main exhaust blowers.
- Return all tools to lab boxes.
- Store all unfinished assignments and lock as needed.
- Start your assigned clean-up duties:
  - Sweeping
  - Shut down your welder or oxy-fuel equipment
  - Store lab work
- Foreman to check individual clean-up assignments and signal for clean-up.
- Foreman to check tools, clean-up procedure, and equipment storage.
- All students to remain in the lab until the foreman or instructor checks clean-up process.
- Students are dismissed by the Instructor, not the bell. Students are not to line up at the door, be in the hall, or leave the classroom or lab prior to dismissal by the teacher.
- Foreman leads class to exit.

Mobile Technology Policy

Cell phones, MP3 players and other mobile devices are included in the definition of personal mobile technology. It is expected that students will realize that mobile technology devices have their time and place and will utilize them appropriately, as stated in this handbook while in the Welding Technology Program classroom/lab. Students will abide by any policies stated within the Auburn Student Handbook and Technology Agreement while at Auburn Career Center.

Classroom Rules, Consequences and Rewards

1) No food
2) No drinks without twist off caps
3) Only use laptops with permission
4) Respect towards others property / Auburn's property
5) Do not disrupt the learning process of others
6) Be respectful to all
7) Use of proper language, no swearing.
8) No cell phone use during school

If all students are present for a full week, donuts will be supplied to the class as a reward.

CTSO

Overview of SkillsUSA

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce. We help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical and skilled service (including health) occupations.

Membership:

SkillsUSA serves more than 333,527 students and instructors annually. This includes 19,019 instructors who join as professional members. Including alumni, Skills USA membership totals over 394,000. SkillsUSA has served nearly 14 million annual members cumulatively since 1965 and is recognized by the U.S. Department of Education and the U.S. Department of Labor as a successful model of employer-driven workforce development.

Mission:

SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens. We improve the quality of our nation's future skilled workforce through the development of Framework skills that include personal, workplace and technical skills grounded in academics. Our vision is to produce the most highly skilled workforce in the world, providing every member the opportunity for career success.

APPENDIX

AUBURN CERTIFICATES

Auburn Honors Certificate Requirements

- 95% Attendance rate for two years at Auburn (no more than 18 days over two years)
- Earned a 3.5 or higher grade point average in their career tech program over two years
- Safety certification earned in career tech program
- Employability skills earned in career tech program
- Passage of four (4) Ohio Career Technical Competency Analysis exams and/or earning twelve (12) points of Industry Recognized Credentials in the program's Career Field
- Active participation in the program's Career Technical Student Organization
- High school diploma for Seniors

Auburn Distinction Certificate Requirements

- 93% Attendance rate for two years at Auburn (no more than 26 days over two years)
- Earned a 3.0 or higher grade point average in their career tech program over two years
- Safety certification earned in career tech program
- Employability skills earned in career tech program
- Passage of three (3) Ohio Career Technical Competency Analysis exams and/or earning six (6) points of Industry Recognized Credentials in the program's Career Field
- Active participation in the program's Career Technical Student Organization
- High School Diploma for Seniors

Auburn Merit Certificate Requirements

- Earned high school credit for their career tech program over two years
- Safety certification earned in career tech program
- Employability skills earned in career tech program
- Overall passage of Ohio Career Technical Competency Analysis exams and/or earning three (3) points of Industry Recognized Credentials in the program's Career Field

Auburn Completion Certificate Requirements

- Earned high school credit for their career tech program over two years
- Safety certification earned in career tech program
- Employability skills earned in career tech program

BUSINESS PARTNERSHIPS AND STUDENT INTERNSHIPS

The Business Partnership program is an educational opportunity that prepares a student for workforce employment and transition to post-secondary education. During the program, students will apply academic, employability, and technical skills in the workplace. There are three levels students can participate in including:

- Internship
- Mentorship
- Career Field Experience

Students must meet specific criteria in order to participate. Additional information is available in the Auburn Student/Parent Handbook.

CAREER SAFE PROGRAM/OSHA 10-HOUR GENERAL INDUSTRY TRAINING

Description of Program

The OSHA Outreach Training Program for General Industry provides training for students, entry level workers, and employers on the recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces in general industry. The program also provides information regarding workers' rights, employer responsibilities, and how to file a complaint. Through this training, OSHA helps to ensure that workers are more knowledgeable about workplace hazards and their rights. Each module contains a brief assessment, which must be successfully completed before the student can move on to the next module. Once all modules have been viewed and the corresponding assessments are passed, there is a comprehensive final assessment.

Purpose

The purpose of the program is to provide students with basic safety awareness training so they will be able to recognize, avoid and prevent safety and health hazards in the workplace. Young workers develop a safety mindset and acquire marketable skills for a competitive edge.

Credential Earned

Students who successfully complete the CareerSafe OSHA 10-Hour course receive an OSHA 10-Hour General Industry wallet card from the OSHA Training Institute (OTI). As a result, they become more employable, gaining a competitive advantage in the job market.

Student Support Services:

- Special Education Department: Intervention Specialist.
- Student Services: Counseling and Career Development Services.
    - You can make an appointment to see a counselor or recruitment specialist by visiting the Student Services office.

Symplicity

It is with great enthusiasm that I want to announce an opportunity for students to participate in an on-line job match software program. The online job match software, Symplicity, allows students to develop an online profile and to upload a resume and cover letter in order to apply for employment. Once students choose to apply to job opportunities posted by local employers interested in Auburn students, those employers can contact students directly for interviews.
If you would prefer your son or daughter not to participate in our on-line job board or at in school job fairs, please contact the high school office or send in a note.

TECHNOLOGY LITERACY PROGRAM

Description of Course

Technology Literacy is offered to first and second year students at Auburn Career Center. In the first year, the course provides an overview of the basic fundamentals of working with computers. Students will study computer basics such as computer hardware, software, and operating systems. The course introduces basic use of Windows 10 and productivity programs such as Gmail and Microsoft Office 2019 including Word, PowerPoint, and Excel. Students will also begin to use and navigate e-learning environments using Schoology, Internet navigation, and ever-changing technology will also be overviewed within the course.

In the second year, students focus on creating a portfolio that showcases their work over the last two years at Auburn. It includes their resume, three references, a cover letter, a transition plan and samples of the projects they have completed. Also included are the certificates they have earned in their program of study.

Purpose

The purpose of the Technology Literacy course is to provide students with the basic knowledge of working with computers in ways beneficial in their career paths of choice. The course will give them an overview of online communication, email, word processing, spreadsheets, presentation programs, internet navigation, computer security and our technologically evolving world.

Mastery Learning

Grades in the Technology Literacy course will be based on Mastery Learning. Students will be required to achieve 80% on each assignment. Additional attempts will be provided if the 80% benchmark is not achieved.

FINANCIAL LITERACY

Financial understanding is a competency requirement in the Welding program name coursework. Students will learn financial goal setting, borrowing, budgeting, and spending. Through weekly assignments, simulations, and other activities, the financial education students receive will help to prepare students for monetary success post-graduation. All grades will be assigned accordingly based on the completion of assignments and participation. All student accommodations will be met.

Auburn Career Center – Welding

Syllabus Agreement

After reviewing the Welding Technology Syllabus, please sign and return this agreement page to the Welding Instructor.

I have read and understand all of the information included in the Auburn Career Center Welding Technology Syllabus.

Student Name: _____
(Please print)

Student Signature: _____

Date: _____

Parent/Guardian Name: _____
(Please print)

Parent/Guardian Signature: _____

Date: _____