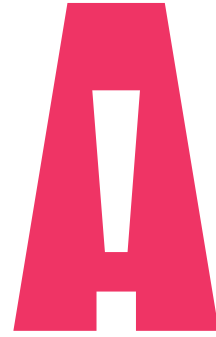


# Auburn Career Center



Attitude – Respect – Responsibility

## Production and Welding Technology

2022-2023 Syllabus

Building Location: Main Building

Room Number: 1B

Instructor Name: Mr. Scott Slagle

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## Contents

Welcome .....	3
Auburn Career Center’s Mission .....	3
Auburn Career Center’s Core Values .....	3
Course Information/ Contact Information.....	3
Program Scope:.....	3
Course(s) Description/Outcomes:.....	4
First Year Sequence.....	5
Second Year Sequence .....	5
Auburn Certificates .....	5
Instructional Philosophy .....	5
Grading.....	5
Employability Skills.....	6
Course Assignments, Labs and Projects.....	6
Course Policies .....	8
Code of Conduct.....	8
Attendance.....	8
Computer Usage .....	8
Safety .....	8
Program Apparel .....	9
Classroom Entry – Attendance.....	9
Classroom Exit – Dismissal .....	9
Mobile Technology Policy .....	9
CTSO .....	11
APPENDIX.....	11
AUBURN CERTIFICATES .....	12
BUSINESS PARTNERSHIPS AND STUDENT INTERNSHIPS.....	13
CAREER SAFE PROGRAM/OSHA 10-HOUR GENERAL INDUSTRY TRAINING.....	13
Student Support Services:.....	13
Symplicity .....	13
TECHNOLOGY LITERACY PROGRAM.....	14
Syllabus Agreement .....	15

## Welcome

Welcome to Auburn Career Center and the Production and Welding Technology Program. Students that complete this program can earn up to 11 college credit hours and 2-3 Industry recognized certifications. Prepare for a career as a multi-skilled technician; learn technical job skills covering electrical, mechanical, fluid power, welding and automation. Students will be able to design, build, operate, maintain and troubleshoot advanced manufacturing systems.

## 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 Information/ Contact Information

Instructor Information: Mr. Scott Slagle 440-357-7542 ext. 8122    [sslagle@auburncc.org](mailto:sslagle@auburncc.org)

## Course Schedule

First Year Schedule: 8:15am to 10:53am

Second Year Schedule: 11:00am to 2:28pm

## Course Credits:

OSHA Safety Certifications

Lakeland Articulated College Credit    11 Credit hours available

## Course Materials

Books, fees (\$25), tools, uniforms (2 shirts/\$49-\$57 each), supplies, steel toe shoes, black jeans.

**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.**

## Program Scope:

### Course(s) Description/Outcomes:

#### **Machine Tools**

This course introduces students to all aspects of machining applications in manufacturing. They will be able to perform routine calculations, interpret basic drawings, begin the process of performing accurate measurements and be able to plan simple machining processes. Students will learn the fundamental principles and practices of cutting, drilling and grinding using modern machine tools, hand tools and precision measuring instruments.

**Business Operations/21st Century Skills, Employability Skills, Leadership and Communications, Business Ethics and Law, Knowledge Management and Information Technology, Global Environment, Business Literacy, Financial Management, Measurement and Interpretation, Layout and Planning, Cutting, Drilling, Grinding, Maintenance**

#### **Welding Technologies**

Students will use fundamental welding principles involving shielded metal arc, oxyacetylene, gas tungsten, and gas metal arc welding in the flat, horizontal, and vertical positions. An emphasis is given to electrode selection, equipment setup, operating procedures, welding inspection, and testing. Students will learn joint designs and layout and will be introduced to welding codes and standards. Additional topics include employability skills and an emphasis will be given to personal safety.

**Physics of Welding, Metallurgy of Welding, Arc Welding Processes, Non-Arc Welding Processes, Testing and Inspection, Thermal Cutting, Precision Machining Measurement and Interpretation, Layout and Planning, Cutting, Maintenance, Safety, Tools and equipment, Site Safety, Personal Safety**

#### **Manufacturing Operations**

Students will learn the production processes applied across manufacturing operations. Students will be able to demonstrate a broad array of technical skills with an emphasis given to quality practices, measurement, maintenance and safety.

**Business Operations/21st Century Skills, Employability Skills, Leadership and Communications, Business Ethics and Law, Knowledge Management and Information Technology, Global Environment, Business Literacy, Financial Management, Electronic Theory, Circuits, Codes and Regulations, Power Supplies, Computer Integrated, Manufacturing, Pumping Systems, Transmission Systems, Pre-Engineering Design and Development, Computer-Aided Modeling, Computer-Aided Drafting, Materials, Production and Process Design, Precision Machining, Layout and Planning, Maintenance, Safety, Tools and Equipment, Personal Safety**

#### **Industrial Maintenance – Subject Code: 176020**

Students will apply the knowledge and skills necessary for installing, maintaining and safely troubleshooting modern industrial machinery. Students will learn about pneumatic, hydraulic, mechanical and electrical systems. They will learn to solve practical maintenance problems, read and interpret drawings and maintenance manuals and understand manufacturing process quality practices. Students will troubleshoot electrical controls, sensors and actuators for automated machinery and manufacturing processes.

## First Year Sequence

Safety, Manufacturing, Electricity, Hand Tools and Machine Safety

## Second Year Sequence

Manufacturing, Welding, Hydraulics, Mechatronics, Pneumatics and Machining

## 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 awarded at the Auburn Completion Ceremony and placed in the student's portfolio.

See APPENDIX for additional information on certificates.

## Instructional Philosophy

The class will consist of a combination of lectures, demonstrations and hands on applications. Students will be evaluated daily on how well they demonstrate the characteristics of an effective worker. It is understood that individual students entering the program will bring with them a variety of career interests, abilities and learning styles. Consequently, individual training plans will be developed for each student. The classroom is operated primarily with hands-on instructional approach, due to the need for students to learn concepts.

## Grading

### *Grading Scale*

<b>Grade:</b>	<b>Performance Standard:</b>
A 90-100%	Independent Learner - Was self-directive, attentive, cooperative, gave maximum effort to complete task or learn skill
B 80-90%	Semi-independent Learner - Needed minimal prompting to be self-directive, attentive, cooperative, and give maximum effort to complete task or learn skill
C 70-80%	Dependent Learner - Needed Occasional prompting to be self-directive, attentive, cooperative, and give maximum effort to complete task or learn skill

- D 60-70%                      Very Dependent Learner - Needed considerable prompting to be self-directive, attentive, cooperative and give maximum effort to complete task or learn skill
  
- F 0-60%                        Unsuccessful - Needed consistent prompting to be self-directive, attentive, cooperative, and give maximum effort to complete task or to learn skill

*Grading Policies*

**Employability Skills**

It is up to the student to earn the grade. Not earning points is based on teacher observations of less-than-professional behavior and poor attitude. Behavior and preparedness are monitored daily—moment by moment—the instructor reflects on this information, quantifies it, and incorporates it into the student’s grade. Each day is a new beginning; it provides a chance to build consistency and demonstrate personal and professional integrity. Behavior and attitude are monitored, measured, and recorded for a grade every day with each lesson attended, each task assigned, and each project completed to form a holistic picture of the student as a valuable employee.

Positive behavior and preparedness are an essential part of a student’s tenure at Auburn. The following situations will positively impact one’s employability skills and result in positive points

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>-Respect displayed towards fellow students and instructor</li> <li>-Avoiding sleeping or appearing to be sleeping</li> <li>-Refraining from swearing or inappropriate language</li> <li>- Working on the task at hand</li> <li>-Avoiding horseplay or unsafe activity</li> <li>-Respect of school property</li> </ul> | <ul style="list-style-type: none"> <li>-Avoiding playing games or otherwise misusing computers, calculators, or personal mobile devices while in class</li> <li>-Excellent attendance (other than a school function or excused absence)</li> <li>-Prepared for class</li> <li>-Turning in assignments on time</li> <li>-Wearing student ID badge displayed in a visible location</li> <li>-Dressed in PWT uniform</li> </ul> |
|--|--|

**Course Assignments, Labs and Projects**

**Daily Log**

- Students will complete a Lab Daily Log. The log will assist the student to recall and keep track of their accomplishments.
- Students will turn in their Lab Daily Log every day to be evaluated.

## Daily Journal

- Students will complete a journal entry daily. By keeping a journal, students will practice expressing thoughts, grammar, punctuation, and structuring sentences. This skill is necessary for success in the workplace.
- Students will turn in their Journal every day to be evaluated.

## Individual Learning Packets

- Students will be assigned learning packets on a variety of topics related to knowledge and skills in the following work environments:
  - Safety
  - Hydraulics
  - Pneumatics
  - Woodworking Equipment Instruction
  - Welding
  - Machine Repair
  - Residential Electricity/Wiring Methods
  - Blueprint Reading
  - Measurement Tools—standard/metric/precision
  - Robotics
  - Milling Machine Skills
  - Lathe Skills
  - Computer Aided Drawing (CAD)
  - Simple Machine Design & Build
- Packets may include written material, vocabulary list, questions, study guides and puzzles. Generally, a written test will conclude each packet.
- Students will turn in packets when requested.
- Lab time will offer the hands on application of these areas for practice of skill development.

## Theory Notebook

- Students will compile a notebook including all written work distributed during each nine week period.
- Students will type a Table of Contents on a classroom computer and use it to organize the notebook.
- Students will turn in their notebook on the last Monday of each grading period.

## Personal Career Portfolio

- Student will write and organize a resume, cover letter, thank you note, and letter of intent to present to future employers.
- Skills USA
- Students will be required to become members and participate in Skills USA functions.
- Students may compete in a variety of skill events from local, regional, state and national levels.
- Students will be involved in monthly class meetings and chapter activities.

## Daily Preparedness

- All students are to be in full **uniform** daily.
- All students are expected to wear their **Auburn ID** at all times.
- Daily **assignments** are to be turned in **on time**.

## Course Policies

This program builds skills progressively and sequentially. Missing class time jeopardizes a student's ability to complete various assignments and projects accurately, in the appropriate sequence, and on time.

Class participation and employability skills are important parts of this program. Grades are based in part on the following:

### Code of Conduct

The published Code of Conduct for Auburn Career Center in the Student/Parent Handbook will be enforced at all times. Refer to the Handbook for discussion of due process of the Code and safety violations. Academic dishonesty will not be tolerated. Infractions will be dealt with according to established Auburn Career Center policy.

### Attendance

The attendance/tardiness policy provided in the Student/Parent Handbook will be followed at all times. It is the responsibility of the student to make arrangements to make up any missed activity the day he/she returns to class. There are certain assignments that are time-sensitive and cannot be made up.

### Computer Usage

Auburn Career Center supports instruction through the use of computers, e-mail, software and other media. Auburn Career Center provides Internet access for use in classroom instruction and for project-based learning. The use of these tools is a privilege, not a right. Any student who violates the Acceptable Use Policy found in the Student/Parent Handbook may lose access to Auburn's computers and network accounts. Notice to students who have access to digital audio and video recording equipment: abuses of this equipment will not be tolerated. Internet access and usage is monitored. Auburn e-mail accounts are monitored. Appropriate use of these accounts is determined by ACC policies.

## Visibility of Student Identification Badges

Auburn Career Center is a full-service career center. Many people pass through the facility during the day. It is important that students wear their student identification badges when in the building. Students who do not display an identification badge will be referred to the Main Office. Failure to wear an ID may result in loss of Employability Skills points and referral for discipline.

## Safety

Prevention of accidents is emphasized at all times in the lab and the classroom. Safety glasses will be worn at all times while working in the lab.



## 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 are required to wear program-specific apparel. Standard daily dress for the PWT program is the black PWT polo shirt, black jeans, black socks, black steel-toed shoes, and the Auburn Career Center ID badge. All students are to be in full uniform daily.

Students are required to have and display on their person at all times an Auburn Career Center ID badge. This badge is provided free during the first week of school. The Auburn ID badge must be clearly visible and presented upon request to any teacher, administrator, resource officer, or school personnel. If a student’s original badge is lost or stolen, a duplicate ID badge must be purchased. The fee for a duplicate ID badge is \$5.00.

Students need to come to school clean and well groomed.

## Classroom Entry – Attendance

Attendance is taken at the start of class. All students should be in their assigned seats 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.

## Classroom Exit – Dismissal

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.

## 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 realize that mobile technology devices have their time and place and will utilize them given appropriate contexts. Students will abide by all policies stated in the Auburn Student Handbook and the Technology Agreement while at Auburn Career Center.

**The PWT instructor/ACC administration reserve the right to make changes to this Syllabus as needed throughout the year.**

### **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.

# Auburn Career Center – Production and Welding Technology

## Syllabus Agreement

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

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

Student Name: \_\_\_\_\_  
*(Please print)*

Student Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Parent/Guardian Name: \_\_\_\_\_  
*(Please print)*

Parent/Guardian Signature: \_\_\_\_\_

Date: \_\_\_\_\_