Washtenaw Community College Comprehensive Report

UAT 350A Semiconductor Infrared (IR) Fusion (UA 8048)
Effective Term: Spring/Summer 2025

Course Cover

College: Advanced Technologies and Public Service Careers
Division: Advanced Technologies and Public Service Careers
Department: United Association Department (UAT Only)
Discipline: United Association Training
Course Number: 350A
Org Number: 28200
Full Course Title: Semiconductor Infrared (IR) Fusion (UA 8048)
Transcript Title: Semiconductor IR Fusion 8048
Is Consultation with other department(s) required: No
Publish in the Following:
Reason for Submission: New Course
Change Information:
Rationale: New United Association course
Proposed Start Semester: Fall 2024
Course Description: In this course, students will recognize the Infra-red (IR) fusion of Polyvinylidene Fluoride (PVDF) and Polypropylene pipe systems. Students will set up and break down fusion equipment in accordance with the George Fischer (GF) training manuals. Students will also program the proper size and material to be fused and perform hands-on welding. In addition, students will perform hands-on fusion of required pipe types and sizes to meet acceptable industry standards. At the end of this course students will have the opportunity to take the UA GFIR certification exam. Limited to United Association Instructor Training Program graduates.

Course Credit Hours

Variable hours: No
Credits: 1.5
The following Lecture Hour fields are not divisible by 15: Student Min ,Instructor Min
Lecture Hours: Instructor: 22.5 **Student:** 22.5
The following Lab fields are not divisible by 15: Student Min, Instructor Min
Lab: Instructor: 1.5 **Student:** 1.5
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 24 **Student:** 24
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Demonstrate the set-up and breakdown of the IR 63+,110+, and 225+ fusion equipment, power supply and accessories.
   Assessment 1
   Assessment Tool: Outcome-related demonstration
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Checklist
   Standard of success to be used for this assessment: 80% of the students will score 80% or higher.
   Who will score and analyze the data: U.A. Instructors

2. Demonstrate the sequential programming of the varying sizes and materials used in infrared fusion in accordance with the GF training manuals.
   Assessment 1
   Assessment Tool: Outcome-related demonstration
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Checklist
   Standard of success to be used for this assessment: 80% of the students will score 80% or higher.
   Who will score and analyze the data: U.A. Instructors

3. Identify the process and equipment used in IR fusion of pipe that meet acceptable industry standards.
   Assessment 1
   Assessment Tool: Outcome-related exam questions
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 80% of the students will score 80% or higher.
   Who will score and analyze the data: U.A. Instructors

Course Objectives

1. Uncrate the IR 63+,110+, and the 225+ fusion equipment.
2. Assemble all accessories for each machine.
3. Identify the different types of power supplies required.
4. Identify the different materials that can be fused.
5. Demonstrate inputting the proper material and size into the fusion equipment.
6. Demonstrate setting the proper overlap into the fusion equipment.
7. Explain the use of the equipment as required in the GF manuals.
8. Demonstrate hands-on fusion per UA GFIR Standards.
9. Review required personal protective equipment (PPE) for safe operation of equipment.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Reviewer	Action	Date
Faculty Preparer:		
Tony Esposito	*Faculty Preparer*	*May 03, 2024*
Department Chair/Area Director:		
Marilyn Donham	*Recommend Approval*	*May 07, 2024*
Dean:		
Eva Samulski	*Recommend Approval*	*May 15, 2024*
Curriculum Committee Chair:		
Randy Van Wagnen	*Recommend Approval*	*Nov 07, 2024*
Assessment Committee Chair:		
Jessica Hale	*Recommend Approval*	*Nov 21, 2024*
Vice President for Instruction:		
Brandon Tucker	*Approve*	*Nov 26, 2024*