MASTER SYLLABUS

WASHTENAW COMMUNITY COLLEGE

Course Discipline Code & No: UAR172 **Title:** Types of Fire Protection Systems and Alarms **Effective Term** SS 2009

Division Code: VCT **Department Code:** UA **Org #:** 28310

Don't publish: ☐ College Catalog ☒ Time Schedule ☐ Web Page

Reason for Submission. Check all that apply.

- ☐ New course approval
- ☐ Three-year syllabus review/Assessment report
- ☐ Course change
- ☐ Reactivation of inactive course
- ☐ Inactivation (Submit this page only.)

Change information: Note all changes that are being made. Form applies only to changes noted.

- ☐ Consultation with all departments affected by this course is required.
- ☐ Course discipline code & number (was _____)*
  *Must submit inactivation form for previous course.
- ☐ Course title (was _____)
- ☐ Course description
- ☐ Course objectives (minor changes)
- ☐ Credit hours (credits were: _____)
- ☐ Total Contact Hours (total contact hours were: _____)
- ☐ Distribution of contact hours (contact hours were: lecture: _____ lab _____ clinical _____ other _____)
- ☐ Pre-requisite, co-requisite, or enrollment restrictions
- ☐ Change in Grading Method
- ☐ Outcomes/Assessment
- ☐ Objectives/Evaluation
- ☐ Other _____

Rationale for course or course change. Attach course assessment report for existing courses that are being changed.

Approvals Department and divisional signatures indicate that all departments affected by the course have been consulted.

Department Review by Chairperson ☐ New resources needed ☐ All relevant departments consulted

Print: Dan Welch (Faculty/Preparer) Signature D. Welch Date: 2/2/09

Print: _____ (Department Chair) Signature _____ Date: _____

Division Review by Dean

☐ Request for conditional approval

Recommendation ☐ Yes ☐ No D. Welch (Dean's/Administrator's Signature) 2/2/09 (Date)

Curriculum Committee Review

Recommendation _____

☐ Tabled ☒ Yes ☐ No Lisa Veasey (Curriculum Committee Chair's Signature) 3/18/09 (Date)

Vice President for Instruction Approval

Roger M. Poland. (Vice President's Signature) 3/19/09 (Date)

Approval ☑ Yes ☐ No ☐ Conditional

Do not write in shaded area.

Log File 2/18/09 ☐ Ecopy ☐ Banner 3/20 C&A Database 3/20 C&A Log File 3/20 fn ☐ Basic skills ☐ Contact fee ☐

20090l

Please return completed form to the Office of Curriculum & Assessment and email an electronic copy to sjohn@wccnet.edu for posting on the website.

***Complete ALL sections which apply to the course, even if changes are not being made.**

Course: UAR172	**Course title:** Types of Fire Protection Systems and Alarms

Credit hours: 3

If variable credit, give range:

_____ _ to _____ credits

Contact hours per semester:

	Student	Instructor
Lecture:	45	___
Lab:	___	___
Clinical:	___	___
Practicum:	___	___
Other:	___	___
Totals:	45	___

Are lectures, labs, or clinicals offered as separate sections?

☐ Yes - lectures, labs, or clinicals are offered in separate sections

☐ No - lectures, labs, or clinicals are offered in the same section

Grading options:

☐ P/NP (limited to clinical & practica)

☐ S/U (for courses numbered below 100)

☒ Letter grades

Prerequisites. Select one:

☒ College-level Reading & Writing ☐ Reduced Reading/Writing Scores (Add information at Level I prerequisite) ☐ No Basic Skills Prerequisite (College-level Reading and Writing is not required.)

In addition to Basic Skills in Reading/Writing:

Level I (enforced in Banner)

	Course	Grade	Test	Min. Score	Concurrent Enrollment (Can be taken together)	Corequisites (Must be enrolled in this class also during the same semester)
	_____	___	_____	_____	☐	_____
☐ and ☐ or	_____	___	_____	_____	☐	_____
☐ and ☐ or	_____	___	_____	_____	☐	_____
☐ and ☐ or	_____	___	_____	_____	☐	_____

Level II (enforced by instructor on first day of class)

	Course	Grade	Test	Min. Score
	_____	___	_____	_____
☐ and ☐ or	_____	___	_____	_____
☐ and ☐ or	_____	___	_____	_____

Enrollment restrictions (In addition to prerequisites, if applicable.)

☐ and ☐ or Consent required ☐ and ☒ or Admission to program required ☐ and ☐ or Other (please specify):

Program: UA apprenticeship _____

Please send syllabus for transfer evaluation to:

Conditionally approved courses are not sent for evaluation.

Insert course number and title you wish the course to transfer as.

☐ E.M.U. as _____

☐ U of M as _____ ___

☐ _____ as _____ _____

☐ _____ as _____

☐ _____ as _____

☐ _____ as _____

Course UAR172	Course title Types of Fire Protection Systems and Alarms

Course description State the purpose and content of the course. Please limit to 500 characters.	This course covers various types of fire protection systems which include wet pipe and anti freeze systems. Topics include the design principles, specification, installation, and operation of fire protection systems. This course is taught at United Association (UA) Training Centers throughout the United States and Canada. Enrollment is limited to apprentices accepted in to a UA training program.	
Course outcomes List skills and knowledge students will have after taking the course. **Assessment method** Indicate how student achievement in each outcome will be assessed to determine student achievement for purposes of course improvement.	**Outcomes** (applicable in all sections)	**Assessment** Methods for determining course effectiveness
	Upon successful completion of this course, the student will be able to: • Explain both wet-pipe and anti-freeze sprinkler systems • Identify the reasons why wet-pipe systems advantages • Identify the advantages and disadvantages of dry-pipe sprinkler systems and when and where to use them. • Explain the various designs employed in dry-pipe valves and the components common to all dry-pipe valves currently being installed. • Explain the role of air pressure in a dry-pipe system. • Identify a variety of individual dry-pipe valves and quick-opening devices. • Explain the different designs and operating principles that result from various combinations of differential and mechanical features of dry-pipe valves and quick-opening devices. • Explain the primary difference between a pre-action and a deluge system • Describe the make-up of combined dry-pipe and pre-action systems and identify the situations in which they are appropriate. • Identify the characteristics of, uses for, and requirements of installed circulating closed loop sprinkler systems. • Explain what situations call for the installation of combined sprinkler and standpipe systems and the restrictions which apply to their use.	This course is assessed externally by the local's Joint Apprenticeship Training Committee (JATC), consisting of industry representatives and UA members. The local receives feedback on needed technical updates and apprentice skill performance.

	• Explain the design and operation of foam-water sprinklers and spray nozzles. • Install sprinkler systems employing aqueous film forming foam and film forming fluoroprotein foam. • Employ high pressure carbon dioxide systems. • Indentify the elements of low pressure carbon dioxide systems and explain how they work. • Identify the types of copper tubing acceptable for use in sprinkler systems and be able to install each correctly.	
Course Objectives Indicate the objectives that support the course outcomes given above. **Course Evaluations** Indicate how instructors will determine the degree to which each objective is met for each student.	**Objectives** (applicable in all sections) Objectives and evaluation methods follow the International Pipe Trades Curriculum Outline issued by the UA Training Department.	**Evaluation** Methods for determining level of student performance of objectives

List all new resources needed for course, including library materials.
No new resources, courses are taught at existing UA local training schools.

Student Materials:

List examples of types Texts Supplemental reading Supplies Uniforms	UA local training schools provide all the necessary books and materials for the students.	**Estimated costs** $ 0

Equipment Tools Software		

Equipment/Facilities: Check all that apply. (All classrooms have overhead projectors and permanent screens.)

Check level only if the specified equipment is needed for all sections of a course.

☐ Level I classroom
Permanent screen & overhead projector

☐ Level II classroom
Level I equipment plus TV/VCR

☐ Level III classroom
Level II equipment plus data projector, computer, faculty workstation

☐ Off-Campus Sites
☐ Testing Center
☐ Computer workstations/lab
☐ ITV
☐ TV/VCR
☐ Data projector/computer
☒ Other Taught at UA Local schools

Assessment plan:

Learning outcomes to be assessed (list from Page 3)	Assessment tool	When assessment will take place (semester & year)	Course section(s)/other population	Number students to be assessed
• Explain both wet-pipe and anti-freeze sprinkler systems • Identify the reasons why wet-pipe systems advantages • Identify the advantages and disadvantages of dry-pipe sprinkler systems and when and where to use them. • Explain the various designs employed in dry-pipe valves and the components common to all dry-pipe valves currently being installed. • Explain the role of air pressure in a dry-pipe system. • Identify a variety of individual dry-pipe valves and quick-opening devices. • Explain the different designs and operating principles that result from various	Contractors (employer) provide paper feedback forms for apprentice skill performance reviews. JATC contractor members provide specifications detailing technical updates.	WCC will prepare a summary report on assessment activities in Winter 2011 and every three years thereafter.	All	All

combinations of differential and mechanical features of dry-pipe valves and quick-opening devices. • Explain the primary difference between a pre-action and a deluge system • Describe the make-up of combined dry-pipe and pre-action systems and identify the situations in which they are appropriate. • Identify the characteristics of, uses for, and requirements of installed circulating closed loop sprinkler systems. • Explain what situations call for the installation of combined sprinkler and standpipe systems and the restrictions which apply to their use. • Explain the design and operation of foam-water sprinklers and spray nozzles. • Install sprinkler systems employing aqueous film forming foam and film forming fluoroprotein foam. • Employ high pressure carbon dioxide systems. • Indentify the elements of low pressure carbon dioxide systems and explain how they work.				

• Identify the types of copper tubing acceptable for use in sprinkler systems and be able to install each correctly.				

Scoring and analysis of assessment:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Attach the rubric/scoring guide.

   Individual locals use apprentice feedback forms filled out by the employing contractor.

2. Indicate the standard of success to be used for this assessment.

   The standard of success is set by the local JATC.

3. Indicate who will score and analyze the data (data must be blind-scored).

   The data is analyzed by the JATC as a committee.

4. Explain the process for using assessment data to improve the course.

   Results are initially shared with the training coordinator for the local. The training coordinator then works with appropriate instructor staff to make needed changes.