

Washtenaw Community College Comprehensive Report

UAT 250 Advanced Plan Reading UA 2095

Effective Term: Spring/Summer 2023

Course Cover

College: Advanced Technologies and Public Service Careers

Division: Advanced Technologies and Public Service Careers

Department: United Association Department

Discipline: United Association Training

Course Number: 250

Org Number: 28200

Full Course Title: Advanced Plan Reading UA 2095

Transcript Title: Advanced Plan Reading UA 2095

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Web Page

Reason for Submission: Course Change

Change Information:

Course title

Course description

Outcomes/Assessment

Objectives/Evaluation

Rationale: Update United Association course

Proposed Start Semester: Spring/Summer 2023

Course Description: In this course, students will develop problem-solving skills related to construction documentation for coordinating piping systems. Students will interpret and analyze construction drawings and piping system plans to identify differences in specifications, plan submittals and associated construction drawings. Utilizing current technologies, techniques and digital tools, students will demonstrate the construction process for a piping system. The title of this course was previously Advanced Plan Reading UA 2005. Limited to United Association program participants.

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

Degree Attributes

Below College Level Pre-Reqs

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Develop strategies to explain the importance of advanced plan reading and related drawings relevant to current technologies.

Assessment 1

Assessment Tool: Skills demonstration

Assessment Date: Spring/Summer 2023

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Skills 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. List the construction documentation required in each stage of the construction process.

Assessment 1

Assessment Tool: Outcome-related quiz

Assessment Date: Spring/Summer 2023

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

3. Present a lesson plan that demonstrates construction of a piping system using specifications, submittals, construction drawings, and digital technologies.

Assessment 1

Assessment Tool: Teaching demonstration

Assessment Date: Spring/Summer 2023

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Departmentally-developed rubric

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. Identify current technologies and best practices for reading advanced plans and drawings in construction design.

2. Explain concepts, methods, and steps used in the construction industry of coordinated drawings and piping system designs.
3. Discuss the costs, benefits, and the Return-on-Investment (ROI) of advanced plan reading technologies.
4. Locate and navigate online UA resources available for use at the local Training Center.
5. Identify the construction documents used in office and onsite field applications given general and special situations.
6. Describe the process for identifying and recording information for construction project specifications, submittals, and architectural/mechanical plans.
7. Identify the construction documents and related specific information used in each step of the construction project life cycle.
8. Explain the relationship between information and interpretation of construction documentation and its effects on the installation.
9. Identify the topics covered in each chapter of the course book and highlight subject matter that should be covered at local training centers.
10. Identify and compare current digital technologies available in construction design.
11. Identify construction cloud platforms used for storing, organizing, and scheduling construction documents.
12. Create a layout for a piping system utilizing construction drawings and current technologies.

New Resources for Course

Course Textbooks/Resources

Textbooks

International Pipe Trades Joint Training Committee. *Advanced Plan Reading & Related Drawing*, 2nd ed. International Pipe Trades Joint Training Committee, 2021

Manuals

Periodicals

Software

Equipment/Facilities

Level I classroom

Data projector/computer

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Tony Esposito</i>	<i>Faculty Preparer</i>	<i>Oct 21, 2022</i>
Department Chair/Area Director: <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Nov 30, 2022</i>
Dean: <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>Dec 08, 2022</i>
Curriculum Committee Chair: <i>Randy Van Wagnen</i>	<i>Recommend Approval</i>	<i>Feb 06, 2023</i>
Assessment Committee Chair: <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Feb 06, 2023</i>
Vice President for Instruction: <i>Victor Vega</i>	<i>Approve</i>	<i>Feb 09, 2023</i>

Washtenaw Community College Comprehensive Report

UAT 250 Advanced Plan Reading (UA 2005) Effective Term: Fall 2020

Course Cover

Division: Advanced Technologies and Public Service Careers

Department: United Association Department

Discipline: United Association Training

Course Number: 250

Org Number: 28200

Full Course Title: Advanced Plan Reading (UA 2005)

Transcript Title: Advanced Plan Reading 2005

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Web Page

Reason for Submission: Course Change

Change Information:

Consultation with all departments affected by this course is required.

Course title

Course description

Outcomes/Assessment

Objectives/Evaluation

Rationale: Update United Association course

Proposed Start Semester: Fall 2020

Course Description: In this course, students will identify and develop teaching methods for reading architectural and engineering drawings and plans while utilizing current technologies for use at their local Training Centers. Students will interpret multiple types of drawings, review submittal data and job specifications as well as identify common problems and solutions associated with drawings and plans. In addition, students will develop and demonstrate lesson plans and activities for curriculum at their Training Centers. The title of this course was previously Advanced Applied Drawing. Limited to United Association program participants.

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

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Lab: Instructor: 1.5 Student: 1.5

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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

Degree Attributes

Below College Level Pre-Reqs

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Identify and recognize current technologies and their capabilities for reading plans and drawings.

Assessment 1

Assessment Tool: Outcome-related essay questions

Assessment Date: Fall 2020

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Rubric

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 current technologies for reading advanced plans and drawings in the construction industry.

Assessment 1

Assessment Tool: Skills demonstration

Assessment Date: Fall 2020

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Skills 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. Prepare and present a lesson plan for advanced plan reading technologies curriculum at the local Training Center.

Assessment 1

Assessment Tool: Presentation

Assessment Date: Fall 2020

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Observational 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

Course Objectives

1. Identify the need for and the methods used to instruct apprentices how to construct a sleeve drawing and deck layout.

2. Develop strategies to explain the importance of advanced plan reading and related drawings.
3. Develop strategies needed to teach apprentices about isometric drawing and its uses.
4. Explain concepts, methods, and steps used in the construction of a coordinated drawing and piping systems design.
5. Develop strategies needed to teach apprentices how to review sample submittal data, job specifications and other drawings to lead construction of a coordinated drawing.
6. Discuss operation instructions for Bluebeam and Navis.
7. Discuss the capabilities of advanced plan reading technologies.
8. Navigate and utilize Bluebeam by opening print documents, applying mark-ups, and locating relevant files.
9. Navigate and utilize Navis by appending models.
10. Review specifications from advanced plan reading technologies.
11. Identify common problems and solutions with advanced plan reading technologies that occur in the classroom.
12. Discuss best practices for teaching methods of advanced plan reading technologies at local Training Centers.
13. Locate and navigate online UA resources available for use at the local Training Center.
14. Prepare and present a five-minute lesson plan for peer review and discussion.

New Resources for Course

Course Textbooks/Resources

Textbooks

International Pipe Trades Joint Training Committee. *Advanced Plan Reading & Related Drawing*, ed. International Pipe Trades Joint Training Committee, 2001

Manuals

Periodicals

Software

Equipment/Facilities

Level I classroom

Data projector/computer

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Tony Esposito</i>	<i>Faculty Preparer</i>	<i>May 21, 2020</i>
Department Chair/Area Director: <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>May 27, 2020</i>
Dean: <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>May 27, 2020</i>
Curriculum Committee Chair: <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Aug 13, 2020</i>
Assessment Committee Chair: <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Aug 25, 2020</i>
Vice President for Instruction: <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Aug 26, 2020</i>