

## Washtenaw Community College Comprehensive Report

### FLP 174 FLP Co-op Education I Effective Term: Fall 2023

#### Course Cover

**College:** Advanced Technologies and Public Service Careers

**Division:** Advanced Technologies and Public Service Careers

**Department:** Advanced Manufacturing

**Discipline:** Fluid Power

**Course Number:** 174

**Org Number:** 14410

**Full Course Title:** FLP Co-op Education I

**Transcript Title:** FLP Co-op I

**Is Consultation with other department(s) required:** No

**Publish in the Following:** College Catalog , Time Schedule , Web Page

**Reason for Submission:** Inactivation

**Change Information:**

**Consultation with all departments affected by this course is required.**

**Rationale:** Program discontinued

**Proposed Start Semester:** Fall 2023

**Course Description:** In this course, students gain skills from a new experience in an approved, compensated, industry-related position. Together with the instructor and employer, students set up work assignments and learning objectives to connect classroom learning with career-related work experience.

#### Course Credit Hours

**Variable hours:** Yes

**Credits:** 1 – 3

**Lecture Hours: Instructor: 0 Student: 0**

**Lab: Instructor: 0 Student: 0**

**Clinical: Instructor: 0 Student: 0**

**Other: Instructor: 120 to 360 Student: 120 to 360**

**Total Contact Hours: Instructor: 120 to 360 Student: 120 to 360**

**Repeatable for Credit:** YES

**Number of times the course can be repeated for credit:** 1

**Maximum Hours:** 3

**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****Course Objectives**

1. The student with the instructor and employer will complete a Cooperative Education Work Agreement which will include hours of work, locaiton, rate of pay and speific assignments.
2. Using the Student Learning Objectives Form, the student with the instructor and employer will complete a learning plan for the semester. This plan will include a minimum of three learning objecrives and criteria for evaluation specific to the students work experience.
3. Using the Student Report on Cooperative Work Experience Form, the student will write a final report on the COOP experience containing the following items: a description of the assignment, a summary of skills and abillities used on the job, ways in which coursework was integrated into job tasks, an assessment of how well the objectives established at the beginning of the assignment were achieved and other reactions to and/or impressions of the experience.

**New Resources for Course****Course Textbooks/Resources**

Textbooks  
Manuals  
Periodicals  
Software

**Equipment/Facilities**

<b><u>Reviewer</u></b>	<b><u>Action</u></b>	<b><u>Date</u></b>
<b>Faculty Preparer:</b> <i>Allan Coleman</i>	<i>Faculty Preparer</i>	<i>Jan 06, 2023</i>
<b>Department Chair/Area Director:</b> <i>Allan Coleman</i>	<i>Recommend Approval</i>	<i>Jan 06, 2023</i>
<b>Dean:</b> <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>Jan 09, 2023</i>
<b>Curriculum Committee Chair:</b> <i>Randy Van Wagnen</i>	<i>Reviewed</i>	<i>Feb 08, 2023</i>
<b>Assessment Committee Chair:</b>		
<b>Vice President for Instruction:</b> <i>Victor Vega</i>	<i>Approve</i>	<i>Feb 09, 2023</i>

**WASHTENAW COMMUNITY COLLEGE  
COURSE SYLLABUS**

Department: Fluid Power

New Course

Course Number: FLP174

Existing Course

Course Title: CoOp Education I Fluid Power

Credit Hours: Varies (1-3)

Prerequisites: Successful completion of first semester courses and faculty approval.

Corequisites: \_\_\_\_\_

Catalog Course Description: In this course, the student gains skills from a new experience in an approved, compensated, industry-related position.

Together with the instructor, the employer and CoOp Placement Office, the student determines work assignments and learning objectives to connect classroom learning with career-related work experience.

Contact Hours per week in a lecture/recitation setting  \_\_\_\_\_

Contact Hours per week in a laboratory setting  \_\_\_\_\_

Contact Hours per week in a clinical setting  \_\_\_\_\_

Contact Hours per week in a work setting  8-24 (variable)

Total Contact Hours (per semester): VARIES minimum: 120 hours/1 credit  
maximum: 360 hours/3 credits

Course Justification: (Check all that apply.)

- program specialty
- college transfer
- support course
- division core
- industry training
- personal development
- core curriculum

Prepared By \_\_\_\_\_ (Faculty Member) Date \_\_\_\_\_

Reviewed By George Agin Date 8/29/94  
(Department Chair for Department)

Approved By R.R. Burton Date 8/29/94  
(Dean)

*none*

**MAJOR INSTRUCTIONAL UNITS:** A Major instructional unit is a grouping of topics which naturally relate to one another.

(List, in order, the major instructional units)

1. COOP Work Experience
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.

**COURSE OBJECTIVES:** Use student outcome based language and format. (Ex: The student will define and state the cause of the six major respiratory diseases.)

(Use one page for each instructional unit).

Major Instructional Unit# 1 Heading:

Objective #1: The student with the instructor and employer will complete a Cooperative Education Work Agreement which will include hours of work, location, rate of pay and specific assignments.

Objective #2: Using the Student Learning Objectives Form, the student with the instructor and employer will complete a learning plan for the semester. This plan will include a minimum of three learning objectives and criteria for evaluation specific to the students work experience.

Objective #3: Using the Student Report on Cooperative Work Experience Form, the student will write a final report on the COOP experience containing the following items:

- \*A description of the assignment
- \*A summary of skills and abilities used on the job
- \*Ways in which coursework was integrated into job tasks
- \*An assessment of how well the objectives established at the beginning of the assignment were achieved.
- \*Other reactions to and/or impressions of the experience.

Objective #4:

Objective #5:

Objective #6:

Objective #7:

(Add additional pages if necessary)

**INSTRUCTIONAL METHODS:** (Check the appropriate boxes and describe as needed.)

- |                                     |                                      |   |
|-------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> Lecture    | <input type="checkbox"/> Seminar     | <input type="checkbox"/> Laboratory                         |
| <input type="checkbox"/> Clinical   | <input type="checkbox"/> Telecourse  | <input checked="" type="checkbox"/> On-Site Work Experience |
| <input type="checkbox"/> Self-Paced | <input type="checkbox"/> Other _____ |   |

**EVALUATION CRITERIA:** (Check the appropriate boxes and describe as needed).

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Attendance _____       | <input type="checkbox"/> Quizzes _____                |
| <input type="checkbox"/> Class Discussion _____            | <input type="checkbox"/> Tests _____                  |
| <input type="checkbox"/> Papers _____                      | <input type="checkbox"/> Midterm _____                |
| <input type="checkbox"/> Portfolio _____                   | <input type="checkbox"/> Final Exam _____             |
| <input checked="" type="checkbox"/> Project _____          | <input type="checkbox"/> Independent Study _____      |
| <input checked="" type="checkbox"/> Reports _____          | <input type="checkbox"/> Other (Audition, etc.) _____ |
| <input checked="" type="checkbox"/> Work Performance _____ |   |

**ATTENDANCE REQUIREMENTS:** (For Certification or nonevaluative purposes).

**SPECIAL EQUIPMENT/FACILITY AND ACTIVITY REQUIREMENTS:** (Check the appropriate boxes and describe as needed).

- |  |   |
|--|---|
| <input type="checkbox"/> Lab equipment | <input type="checkbox"/> Testing in Testing Center                  |
| <input type="checkbox"/> LRC Reserves  | <input type="checkbox"/> Student Regional Competitions              |
| <input type="checkbox"/> Computers     | <input type="checkbox"/> Off Campus Sites                           |
| <input type="checkbox"/> Field Trips   | <input checked="" type="checkbox"/> Other Faculty site visits _____ |

(Attach an additional page if necessary).

**PRIMARY TEXT:** (Disregard if text is not used).

Title:  
Author:  
Publisher:

Copyright Yr:  
Est. Cost:

(Attach an additional page if more than one primary text is used).

**SUPPLEMENTAL TEXTS OR COURSE PACKS:**

1. Title: \_\_\_\_\_

Author: \_\_\_\_\_ Copyright Yr: \_\_\_\_\_

Publisher: \_\_\_\_\_ Est. Cost: \_\_\_\_\_

2. Title: \_\_\_\_\_

Author: \_\_\_\_\_ Copyright Yr: \_\_\_\_\_

Publisher: \_\_\_\_\_ Est. Cost: \_\_\_\_\_

(Attach another page if necessary).

**SUPPLIES AND/OR UNIFORMS STUDENT WILL HAVE TO OWN OR ACQUIRE FOR COURSE SUCH AS:** calculators, uniforms, tools, and software, etc. (Other than pen, pencil, paper, or textbook(s)).

Descriptions	Cost Estimates
_____	_____
_____	_____
_____	_____

**REFERENCE MATERIALS STUDENTS WILL BE REFERRED TO SUCH AS:** journals, books, manuals, maps, etc.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**AUDIO/VISUAL AND COMPUTER MATERIALS TO BE USED SUCH AS:** films, video tapes, slides, audio tapes, software, etc.

Title	Source
_____	_____
_____	_____
_____	_____
_____	_____

**WASHTENAW COMMUNITY COLLEGE  
COURSE HANDOUT**

The following information compatible with the Official Course Syllabus must be distributed to students at the first meeting of each course:

1. Course name:
2. Course number:
3. Course description:
4. A list of course objectives by unit:
5. Required text(s) and/or course packs:
6. Criteria for evaluation:
7. Requirements (Attendance, Special, or Other):
8. Hours/week required out-of-class:
9. Additional Information:
10. A schedule of class meeting dates with topics and assignments:

Each Instructor teaching this course should attach a copy of their "Student Handout Sheet" to this document.

JZV 4/18/01  
EJS 9/01

### Course Descriptions

**Division: Technology**  
**Industrial Technology Department**

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**FLP 111: Fluid Power Fundamentals 4 Credit(s)**

Prereqs: None  
Coreqs: None

Last Updated: Winter 2001  
Current Syllabus Date: Fall 2000

30 lecture, 60 lab, 0 clinical, 0 other, 90 total contact hours

Fulfills Core Elements: 5 18 19

**Course Description:**

This is a beginning course in fluid power that deals with the basic principles of hydraulics and pneumatics. Directional valves, pressure controls, flow controls, actuators, and basic pump theory are studied. ANSI and ISO symbols are used to design simple circuits. Disassembly of components and assembly of circuits make up the lab experiences.

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**FLP 174: FLP Co-op Education-I 1-3 Credit(s)**

Prereqs: ~~FLP 111, FLP 112, FLP 113, FLP 114, FLP 115, FLP 116, FLP 117, FLP 118, FLP 119, FLP 120, FLP 121, FLP 122, FLP 123, FLP 124, FLP 125, FLP 126, FLP 127, FLP 128, FLP 129, FLP 130, FLP 131, FLP 132, FLP 133, FLP 134, FLP 135, FLP 136, FLP 137, FLP 138, FLP 139, FLP 140, FLP 141, FLP 142, FLP 143, FLP 144, FLP 145, FLP 146, FLP 147, FLP 148, FLP 149, FLP 150, FLP 151, FLP 152, FLP 153, FLP 154, FLP 155, FLP 156, FLP 157, FLP 158, FLP 159, FLP 160, FLP 161, FLP 162, FLP 163, FLP 164, FLP 165, FLP 166, FLP 167, FLP 168, FLP 169, FLP 170, FLP 171, FLP 172, FLP 173, FLP 175, FLP 176, FLP 177, FLP 178, FLP 179, FLP 180, FLP 181, FLP 182, FLP 183, FLP 184, FLP 185, FLP 186, FLP 187, FLP 188, FLP 189, FLP 190, FLP 191, FLP 192, FLP 193, FLP 194, FLP 195, FLP 196, FLP 197, FLP 198, FLP 199, FLP 200~~ Consent **REQUIRED**

Last Updated: Fall 1999  
Current Syllabus Date: Spr/Sum 1994

Coreqs: None

0 lecture, 0 lab, 0 clinical, 120 other, 120 total contact hours

Fulfills Core Elements: None

**Course Description:**

In this course, students gain skills from a new experience in an approved, compensated, industry-related position. Together with the instructor and employer, students set up work assignments and learning objectives to connect classroom learning with career-related work experience. Instructor consent is required to register for this course.

JZV  
4/18/01

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**FLP 213: Hydraulic Controls 3 Credit(s)**

Prereqs: FLP 111  
Coreqs: FLP 214

Last Updated: Winter 2001  
Current Syllabus Date: Fall 2000

30 lecture, 30 lab, 0 clinical, 0 other, 60 total contact hours

Fulfills Core Elements: 5 7 8 9 10 18 19

**Course Description:**

FLP 213 parallels FLP 214 concentrating on the controls used in hydraulic circuits. The course further develops the concepts of directional, pressure, and flow controls covered in FLP 111. Print reading is emphasized, with the addition of modular valves such as cartridge valves and stack valves. Ladder logic and timing diagrams describing the sequencing of events within a control circuit are also covered. Lab time is an integral part of the course. FLP 214 is a co-requisite with this course.