

WASHTENAW COMMUNITY COLLEGE
COURSE/SYLLABUS APPROVAL FORM (CSAF)

ELE 174

For help screens, select a field and press F1

SECTION I. COURSE SUBMISSION INFORMATION

1. Course: (For an existing course enter the existing discipline, number, and title. For a new course enter the proposed number & title.) Discipline/No: <u>ELE 174</u> Title: <u>Ele Co-Op Education I</u>		
Division Code: <u>TEC</u> Department Code: <u>E/E</u> Requested Start Term: <u>Fall 1998</u>		
2. Type of Approval: (applies to both new courses and changes) ☒ Full Approval ☐ Conditional Approval ☐ This proposal has received conditional approval previously. Term Offered: <u>Fall 1998</u>	3. Reason for Submission: This Course is being submitted for: (check all that apply) ☐ New Course Approval (Skip the rest of Section I and go directly to Section II.) ☐ Five-year Syllabus Review ☐ No changes to course ☐ Major Change(s) ☒ Minor Change(s) (If <u>not</u> due for review, submit sections I, II, and revised parts of Section III.) ☐ Reactivation of Inactive Course ☐ Termination (Submit Sections I and II only.)	
4. Change Information: (Check all that apply. Make proposed changes in Section III, Course Syllabus.) Minor Changes ☐ Course Discipline/Number ☐ Course Title ☐ Course Description ☐ Capacity (capacity was: <u> </u>) ☒ Pre or Corequisites within Department ☐ Course Objectives (minor changes) ☐ Distribution of Contact Hours (contact hours were: lect: <u> </u> lab <u> </u> clin <u> </u> exp <u> </u>) ☐ Distance Learning - minor (Attach Preliminary Approval Form for Distance Learning & the Section Handout.) ☐ Other <u> </u>		
Major Changes (Major changes will be reviewed by Curriculum Committee.) ☐ Credit hours (credits were: <u> </u>) ☐ Core Element Approval ☐ first time ☐ add additional elements ☐ Core Element Removal (Elements to be removed <u> </u>) ☐ Grading ☐ Pre or Corequisites outside Department ☐ Course Objectives (major changes) ☐ Total Contact Hours (total contact hours were: <u> </u>) ☐ Honors (Complete Part G of Section III, Honors Addendum.) ☐ Distance Learning - major (Attach Preliminary Approval Form for Distance Learning & the Student Handout for the Distance Section.) ☐ Other <u> </u>		

5. Rationale for changes:
Prerequisite and corequisite courses are being changed.

SECTION II. COURSE REVIEW INFORMATION AND SIGNATURES

1. Department Review (To be completed by department chair; if recommendation is no, initial and return to preparer with rationale attached.) Will additional resources be required? ☐ yes ☒ no (If yes, explain <u> </u>) Have departments which may be affected by this course been consulted? ☒ yes ☐ no (Explain <u> </u>) Does the department support approval of this course? ☒ yes ☐ no Print: <u>John Trame</u> Faculty/Preparer Signature: <u>[Signature]</u> Date: <u>6-2-98</u> Print: <u>John Trame</u> Department Chair Signature: <u>[Signature]</u> Date: <u>6-2-98</u>		
2. Division Review (To be completed by division dean; if recommendation is no, initial and return with rationale attached.) If additional resources are needed, have they been secured? ☒ yes ☐ no ☐ No new resources are needed. Is this a curricular priority for your division? ☒ yes ☐ no (Comment <u> </u>) What is your estimate of projected enrollment? <u> </u> Recommendation ☒ Yes ☐ No Division Dean's Signature: <u>[Signature]</u> Date: <u>6/2/98</u>		
3. Curriculum Committee Review (Attach additional comments if necessary.) Recommendation ☐ Yes ☐ No Curriculum Committee Chair's Signature: <u> </u> Date: <u> </u>		
4. Vice President for Instruction and Student Services Approval (Attach additional comments if necessary.) Recommendation ☐ Yes ☐ No Vice President's Signature: <u>[Signature]</u> Date: <u>6/11/98</u>		
Data File: <u>[Signature]</u>	ACS Code: <u>155</u>	Catalog File Date: <u>[Signature]</u>
Core Elements Approved	New Syllabus Date	CIF File Date: <u>11/9/98</u>

Acc
Core: none

SECTION III. COURSE SYLLABUS
A. COURSE DETAILS

For help screens, select a field and press F1.

1. Course Discipline & No.: <u>ELE 174</u>		2. Course Title: <u>ELE Co-Op Education</u>	
3. Course Description: See the description for all co-op courses at the beginning of these course descriptions.			
4. Credit Hours: _____ If Variable credit, Give Range: <u>1</u> to <u>3</u> If repeatable for credit, how many times? _____		5. Class Capacity: <u>24</u> (If nonstandard, attach Class Capacity Exception form.)	
6. Course Options: ☐ Distance learning (Attach preliminary distance approval form and Section Handout.) ☐ Honors (Complete Part G.) ☐ P/NP Grading (Attach rationale.)		7. Contact Hours per Semester in: Lecture: _____ Lab: _____ Clinical: _____ Experiential: _____ Total Contact Hrs: _____	
8. Prerequisite(s): <u>ELE 111 (or 123A and B),</u> <u>137 & 140 or approval of</u> <u>instructor or work place supervisor</u>		9. Corequisite(s): (limit to 2) _____ _____	
10. a. Course Purpose: ☒ Program Specialty ☐ Program Support ☐ Nonprogram Specialty ☐ Transfer ☐ Enrichment ☐ Basic Skills		b. Is this course a requirement for a program? ☐ Yes (specify the program(s) below) _____ _____ ☐ No	
c. Indicate schools to which you want Curriculum Services to send syllabus: (If transfer is approved, attach documentation.) ☐ EMU ☐ UofM ☐ Other _____			

B. 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. Add additional numbers as needed.

1. Meeting with supervisor, instructor and student to determine student's major objectives. Normally this meeting will take place at the student's workplace.
2. First monthly summary of student's progress.
3. Second monthly summary of student's progress.
4. Third monthly summary of student's progress.
5. Summary of student's entire co-op work experience.
6. Meeting with supervisor, instructor and student to determine the success of student's accomplishment of the major objectives.
7. Other meetings of student and instructor may take place for such reasons as:
 - Student may need advice concerning his or her objectives.
 - Student may need advice in dealing with his or her supervisor
 - Student may need to renegotiate an objective due to circumstances beyond student's control.
 - Student may need advice on workplace skills and/or behavior.

**WASHTENAW COMMUNITY COLLEGE
COURSE SYLLABUS**

Department: Electricity/ElectronicsNew Course ☐Course Number: ELE 174Existing Course ☒Course Title: ELE Co-op EducationCredit Hours: 1 - 3Prerequisites: ELE 111 (or 123A + B), 137 + 140 or approvalCorequisites: None work place supervisor

Catalog Course Description: In this course the student gains skills from a new experience in an approved, compensated, electronics related position. Together with the instructor and employer, the student sets up work assignments and learning objectives to connect classroom learning with career-related work experience. This is the first of two possible co-op experiences.

(Place numbers in the appropriate boxes)

Contact Hours per week in a lecture/recitation setting Contact Hours per week in a laboratory setting Contact Hours per week in a work setting

Total Contact Hours (per semester): _____

Course Justification: (Check all that apply.)

☒ program specialty☐ college transfer☒ support course☐ division core☒ industry training☒ personal development☐ core curriculumPrepared By [Signature]
(Faculty Member)Date 11/14/95Reviewed By [Signature]
(Department Chair for Department)Date 11/14/95Approved By R.R. Burton
(Dean)Date 2/6/96core: none

COURSE OBJECTIVES: Use student based language and format. Ex: The student will define and state the uses of a compiler. List as many as needed.

- Objective #1. The student will gain valuable experience by working with professionals in electronics.
- Objective #2. The student will increase his or her understanding of how electronic equipment is used in the work place.
- Objective #3. The student will gain experience using electronic equipment in the work place.
- Objective #4. The student will gain experience with real world electronics problems.
- Objective #5. The student will become familiar with professional documentation, journals, seminars or conferences
- Objective #6. The student will use and improve good customer relations skills.

MAJOR INSTRUCTIONAL UNITS: (List as many as needed)

1. Meeting with supervisor, instructor and student to determine student's major objectives. Normally this meeting will take place at the student's workplace.
2. First monthly summary of student's progress.
3. Second monthly summary of student's progress.
4. Third monthly summary of student's progress.
5. Summary of student's entire co-op work experience.
6. Meeting with supervisor, instructor and student to determine the success of student's accomplishment of the major objectives
7. Other meetings of student and instructor may take place for such reasons as:
 - Student may need advice concerning his or her objectives.
 - Student may need advice in dealing with his or her supervisor.
 - Student may need to renegotiate an objective due to circumstances beyond the student's control.
 - Student may need advice on workplace skills and/ or behavior.

SUGGESTED EVALUATION CRITERIA: (which may be appropriate to grade students)

☒ Class Attendance see below	☐ Quizzes
☐ Class Discussion	☐ Tests
☐ Papers	☐ Midterm
☐ Portfolio	☐ Final Exam
☐ Project	☐ Independent Study
☒ Reports	☐ Homework
☒ Work Performance	☒ Other Objectives

ATTENDANCE REQUIREMENTS: (For Certification or non-evaluative purposes.)

Supervisor will verify that student works the required number of hours

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

☐ Lab Equipment	☐ Testing in Testing center
☐ LRC Reserves	☐ Student Regional Competitions
☐ Computers	☐ Off Campus Sites
☐ Field trips	☒ Other Place of employment

(Attach and additional pages if necessary)

PRIMARY TEXT: (Omit if text is not used)

1. Title:

Author: Copyright Yr:

Publisher: Est. Cost:

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

ELE 174 Co-op Work Experience

COURSE MATERIALS:

There are no course materials for this course, however a student may need to purchase study materials appropriate to his or her particular objective.

INSTRUCTOR: Arlene Paup
 office TI 214
 phone 973 3604

- PREREQUISITES:
1. A student must complete first year ELE courses
 2. Written approval by the instructor who will supervise the student's work experience
 3. Written approval by the student's work supervisor
 4. A student must work a minimum of 120 hours for one hour credit, a minimum of 240 hours for two hours credit, or a minimum of 360 hours for three hours credit

COURSE DESCRIPTION:

In this course the student gains skills from a new experience in an approved, compensated, electronics related position. Together with the instructor and employer, the student sets up work assignments and learning objectives to connect classroom learning with career-related work experience. This is the first of two possible co-op experiences

COURSE OBJECTIVES:

1. The student will gain valuable experience by working with professionals in electronics.
2. The student will increase his or her understanding of how electronic equipment is used in the work place.
3. The student will gain experience using electronic equipment in the work place.
4. The student will gain experience with real world electronics problems.
5. The student will become familiar with electronics documentation, journals, seminars or conferences (which may be suggested by the instructor and/or supervisor) which will aid the student in accomplishing his or her

objectives.

6. The student will use and improve good customer relations skills.

COURSE SCHEDULE:

The student, his or her supervisor and the instructor will meet at the beginning of the semester to determine three realistic objectives which the student will accomplish during the semester on the job. Normally this meeting will take place at the student's work place.

The instructor and/or the supervisor will suggest documents, journals, seminars, or other materials or activities which will help the student to accomplish the objectives. The student will prepare written documentation for each of these activities.

The instructor will act as resource person guiding the student and offering help when the instructor deems it necessary.

During the semester the student will give the instructor a monthly summary of his or her job experiences.

At the end of the co-op experience, the student will give the instructor a written summary of the entire co-op work experience.

The student and the supervisor will keep a record of the hours worked by the student each week. The record will be turned in to the instructor at the end of the semester.

The student will demonstrate the accomplishment of each objective. The means for demonstration will be predetermined by the instructor and the supervisor.

At the end of the semester the student, supervisor and instructor will meet again to determine how well the objectives have been accomplished.

COURSE GRADE:

Both the student and the supervisor will give the student a grade for the achievement of each objective.

The instructor will determine the student's final grade based on the above grades, evaluation of written documents provided by the student, and on the instructor's observance of the student's progress during the semester.

*First year only courses for pre-requisite only
ELE 174 are highlighted*

Arlene

**ELECTRONICS TECHNOLOGY
ASSOCIATE IN TECHNICAL STUDIES DEGREE PROGRAM: CODE ELET**

**Advisors: William Cleary, Gary Downen, Lawrence Kramer, Catherine Lee,
Philip Mullins, Arlene Paup, Dale Petty, John Trame**

This program trains technicians for employment in almost any of the electrical/electronics cluster of occupations. By choosing the proper technical electives, the student is trained to install, maintain, and troubleshoot a wide range of equipment such as digital computer systems, telephone and data communications systems, automated industrial machine control systems, security systems, or instrumentation systems. In addition to technical skills, the student is trained to communicate effectively in oral and written form and to exercise the interpersonal skills required to work successfully with customers, managers and co-workers.

Course Number	Course Title	Credit Hours
Fall Semester		
ELE 123A	Fundamentals of Electricity (A)	4
ELE 137	Switching Logic	4
ELE 140	Software Concepts	4
ENG 107	Technical Communications (or ENG 111 - Composition I)	3 - 4
		<u>15 - 16</u>
Winter Semester		
ELE 123B	Fundamentals of Electricity (B)	4
ELE 150	PC Hardware Concepts and Troubleshooting	4
Elective	Restricted Humanities Elective *	3
Restricted Elective	ELE 134 ELE 205 PHY 110	Motors and Controls Basic Telephony Applied Physics 4
		<u>15</u>
Fall Semester		
ELE 213	Semiconductor Applications	4
ELE 215	Digital Communications I	4
ELE 240	Career Practices Seminar	2
HSC 131A	Community CPR	0.5
ELE 299	Customer Relations (or ELE 174 - ELE Co-op I)	1
Restricted Elective	ELE 224 ELE 230 ELE 275	Programmable Controllers Computer System Fundamentals Switching Systems 4
		<u>15.5</u>
Winter Semester		
ELE 250	Microprocessor Interfacing	4
PLS 108	Government and Society	3
Restricted Elective	ELE 204 ELE 225	National Electrical Code Digital Communications II 4
Restricted Elective	ELE 235 ELE 244 ELE 245	Computer System Troubleshooting Motion Control Transmission Systems 4
		<u>15</u>

Total credit hours for program: 60.5 - 61.5

* Choose from list of Humanities courses that meet elements 13 and 14.