

PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

FFD 59-10

DEPARTMENT EPICS EFFECTIVE SESSION Fall 2010 *SP 2011*

INSTRUCTIONS: Please check the items below which describe the purpose of this request.

- | | |
|---|---|
| <input checked="" type="checkbox"/> 1. New course with supporting documents | <input type="checkbox"/> 7. Change in course attributes (department head signature only) |
| <input type="checkbox"/> 2. Add existing course offered at another campus | <input type="checkbox"/> 8. Change in instructional hours |
| <input type="checkbox"/> 3. Expiration of a course | <input type="checkbox"/> 9. Change in course description |
| <input type="checkbox"/> 4. Change in course number | <input type="checkbox"/> 10. Change in course requisites |
| <input type="checkbox"/> 5. Change in course title | <input type="checkbox"/> 11. Change in semesters offered (department head signature only) |
| <input type="checkbox"/> 6. Change in course credit/type | <input type="checkbox"/> 12. Transfer from one department to another |

PROPOSED: Subject Abbreviation EPICS Course Number 41100 Long Title Senior Design Participation in EPICS Short Title Sr Design Particp EPICS
Abbreviated title will be used by the Registrar if finalized. (30 CHARACTERS ONLY)

EXISTING: Subject Abbreviation _____ Course Number _____

TERMS OFFERED
Check All That Apply:
 Summer Fall Spring

CAMPUS(ES) INVOLVED
 Calumet N. Central
 Cont Ed Tech Statewide
 Ft. Wayne W. Lafayette
 Indianapolis

CREDIT TYPE
1. Fixed Credit Cr. Hrs. 1
2. Variable Credit Range:
Minimum Cr. Hrs. _____
(Check One) To Or
Maximum Cr. Hrs. _____
3. Equivalent Credit: Yes No

COURSE ATTRIBUTES: Check All That Apply
1. Pass/Not Pass Only
2. Satisfactory/Unsatisfactory Only
3. Repeatable
Maximum Repeatable Credit: _____
4. Credit by Examination
5. Special Fees
6. Registration Approval Type
Department Instructor
7. Variable Title
8. Honors
9. Full Time Privilege
10. Off Campus Experience

Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated
Lecture	50	1	5	33%
Recitation				
Presentation				
Laboratory	100	1	15	67%
Lab Prep				
Studio				
Distance				
Clinic				
Experiential				
Research				
Ind. Study				
Pract/Observ				

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

See attached for course descriptions

*COURSE LEARNING OUTCOMES
See Attached

Calumet Department Head _____ Date _____ Calumet School Dean _____ Date _____
 Fort Wayne Department Head _____ Date _____ Fort Wayne School Dean _____ Date _____
 Indianapolis Department Head _____ Date _____ Indianapolis School Dean _____ Date _____
 North Central School Dean _____ Date _____ North Central Vice Chancellor for Academic Affairs _____ Date _____
 West Lafayette Department Head _____ Date _____ West Lafayette College/School Dean _____ Date _____

Handwritten signature and date: 11/9/10
West Lafayette Registrar _____ Date _____

PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

EFD 59-10

DEPARTMENT EPICS EFFECTIVE SESSION Fall 2010 5P 2011

INSTRUCTIONS: Please check the items below which describe the purpose of this request.

- | | |
|---|---|
| <input checked="" type="checkbox"/> 1. New course with supporting documents | <input type="checkbox"/> 7. Change in course attributes (department head signature only) |
| <input type="checkbox"/> 2. Add existing course offered at another campus | <input type="checkbox"/> 8. Change in instructional hours |
| <input type="checkbox"/> 3. Expiration of a course | <input type="checkbox"/> 9. Change in course description |
| <input type="checkbox"/> 4. Change in course number | <input type="checkbox"/> 10. Change in course requisites |
| <input type="checkbox"/> 5. Change in course title | <input type="checkbox"/> 11. Change in semesters offered (department head signature only) |
| <input type="checkbox"/> 6. Change in course credit/type | <input type="checkbox"/> 12. Transfer from one department to another |

PROPOSED: Subject Abbreviation <u>EPCS</u> Course Number <u>41100</u> Long Title <u>Senior Design Participation in EPICS</u> Short Title <u>Sr Design Particp in EPICS</u> <small>Abbreviated title will be entered by the Office of the Registrar if omitted. (50 CHARACTERS ONLY)</small>	EXISTING: Subject Abbreviation _____ Course Number _____	TERMS OFFERED Check All That Apply: <input type="checkbox"/> Summer <input checked="" type="checkbox"/> Fall <input checked="" type="checkbox"/> Spring CAMPUS(ES) INVOLVED <input type="checkbox"/> Calumet <input type="checkbox"/> N. Central <input type="checkbox"/> Cont Ed <input type="checkbox"/> Tech Statewide <input type="checkbox"/> Ft. Wayne <input checked="" type="checkbox"/> W. Lafayette <input type="checkbox"/> Indianapolis
---	---	--

CREDIT TYPE 1. Fixed Credit Cr. Hrs. <u>1</u> 2. Variable Credit Range: Minimum Cr. Hrs _____ (Check One) To <input type="checkbox"/> Or <input type="checkbox"/> Maximum Cr. Hrs _____ 3. Equivalent Credit Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	COURSE ATTRIBUTES: Check All That Apply 1. Pass/Not Pass Only <input type="checkbox"/> 2. Satisfactory/Unsatisfactory Only <input type="checkbox"/> 3. Repeatable <input type="checkbox"/> Maximum Repeatable Credit: _____ 4. Credit by Examination <input type="checkbox"/> 5. Special Fees <input type="checkbox"/> 6. Registration Approval Type Department <input type="checkbox"/> Instructor <input type="checkbox"/> 7. Variable Title <input type="checkbox"/> 8. Honors <input type="checkbox"/> 9. Full Time Privilege <input type="checkbox"/> 10. Off Campus Experience <input type="checkbox"/>
---	--

Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated
Lecture	50	1	5	33%
Recitation				
Presentation				
Laboratory	100	1	16	67%
Labs Prep				
Studio				
Distance				
Clinic				
Experiential				
Research				
Ind. Study				
Pract/Obsev				

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

See attached for course descriptions

COURSE LEARNING OUTCOMES

See Attached

Calumet Department Head _____ Date _____	Calumet School Dean _____ Date _____
Fort Wayne Department Head _____ Date _____	Fort Wayne School Dean _____ Date _____
Indianapolis Department Head _____ Date _____	Indianapolis School Dean _____ Date _____
North Central School Dean _____ Date _____	North Central Vice-Chancellor for Academic Affairs _____ Date _____
West Lafayette Department Head _____ Date _____	West Lafayette College/School Dean _____ Date _____
	West Lafayette Registrar _____ Date _____

TO: The Faculty of the College of Engineering
FROM: The EPICS Curriculum Committee of the College of Engineering
RE: New Undergraduate Course, EPCS 41100 Senior Design Participation in EPICS

The curriculum committee of the EPICS program has approved the new course listed below. This action is now submitted to the Engineering Faculty with a recommendation for approval.

EPCS 41100 Senior Design Participation in EPICS

Sem. 1, 2, Lec 0, Lab 2, Cr. 1.

Prerequisite: IDE - Senior standing or

BSEE - ECE 20100 and 20200 and 20700 and 20800 and 25500 and 27000 and 30100 and 30200 and 31100 or

BSCmpE - ECE 20100 and 20200 and 20700 and 20800 and 25500 and 26400 and 27000 and 30100 and 30200 and 33700 and 36200 and 36400 and 36800

Course Description:

Continuation of EPCS courses (see EPCS 10100). Seniors using EPCS 41100 to fulfill capstone or design requirements where approved for their major may be required to satisfy additional course requirements specified by their degree program. EPCS 41100 is offered for 1 credit. The EPICS procedures manual provides information on expected relative workload for EPCS 41100 and EPCS 41200 students. Seniors are responsible for the management tasks of planning and organizing their team project activity. They are expected to contribute expertise from their discipline to the design of the team's projects throughout most of the design process phases of problem identification, specification development, design, production, and deployment. Seniors will also meet with the customer and mentor the first year, sophomores and juniors. May not be taken concurrently with EPCS 41200.

Reason:

To allow for an administrative process to track student participation in an EPICS senior design or capstone experience



William Oakes, Director
EPICS Program

APPROVED FOR THE FACULTY
OF THE SCHOOLS OF ENGINEERING
BY THE ENGINEERING
CURRICULUM COMMITTEE

ECC Minutes #22

Date 4/6/10

Chairman ECC R. Cipra

SUPPORTING DOCUMENTATION

Normally Offered: Each Fall, Spring. Offered Summer by special arrangement. Required Text(s): Service-Learning: Engineering in Your Community, Marybeth Lima and William Oakes, Great Lakes Press, 2004.
Recommended Reference(s): None.

Course Outcomes:

The sequence of EPCS 41100 Senior Design Participation in EPICS and EPCS 41200 Senior Design Participation in EPICS intended to be taken consecutively.

A student who successfully fulfills the course requirements with at least 3 credits of EPICS taken over 2 or more semesters will have demonstrated:

- i. an ability to apply material from their discipline to the design of community-based projects
- ii. an understanding of design as a start-to-finish process
- iii. an ability to identify and acquire new knowledge as a part of the problem-solving/design process
- iv. an awareness of the customer
- v. an ability to function on multidisciplinary teams and an appreciation for the contributions from individuals from multiple disciplines
- vi. an ability to communicate effectively with audiences with widely-varying backgrounds
- vii. an awareness of professional ethics and responsibility
- viii. an appreciation of the role that their discipline can play in social contexts

Lecture Outline:

Weeks	Lectures
1-15	All EPICS students have a common lecture hour. Lecture topics include the design process, verbal and written communication, project management and planning, ethical and legal issues in engineering design, entrepreneurship, intellectual property, team dynamics and leadership and community involvement. Lectures are supplemented with session on specific technical topics relevant to the projects.

Lab Outline:

Week	Major Course Milestones
2	Semester Project Plan
3	Personal Goals
4	Project Charters (new projects); Project Demonstration (continuing projects); Review of Design Notebooks; Delivery Review of Projects to be Delivered Week 4.
5 - 6	Continued Progress on Projects and Project Documentation.
7	Internal Design Review; oral or poster presentation.
8	Peer evaluation and self assessment; Review of Design Notebooks.
9 – 10	Continued Progress on Projects and Project Documentation.
11	Project Design Review; Delivery Review of Projects to be Delivered Week 11.
12 – 14	Continued Progress on Projects and Project Documentation. Team Report; Review of Design Notebooks; Peer evaluation and self assessment
Final	Team Presentation

Time Requirements (as noted from the course syllabus)

Lecture is 50 minutes each week, but attendance requirements vary based on the number of credit hours you are registered for and if you are a new or returning student to EPICS. There are 5 required lectures for new students, and two required lectures for returning students. Students enrolled for one (EPCS 411) credit hour must accumulate at least 5 lecture credits. Students taking two (EPCS 412) credit hours are required to have a semester total of 10 lecture credits. Students with a scheduling conflict with the Monday lecture of EPICS should notify their advisor or TA. A list of all scheduled lectures and more information about making up missed lectures can be found at the EPICS course website.

The typical expectations regarding time spent on EPICS are as follows. But like other courses on campus, you may need to spend more time than is typical to achieve a similar outcome:

2 credit hours (EPCS 412) = average 5 hours/week outside the lecture and lab on your EPICS project

1 credit hour (EPCS 411) = average 3.5 hours/week on your project for the 10 weeks when you don't attend lecture