

Cover Sheet: Request 15176

ECH 4949 0 - 3 credits

Info

Process	Course Modify Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Cynthia Sain csain@che.ufl.edu
Created	7/13/2020 4:21:00 PM
Updated	11/9/2020 2:09:44 PM
Description of request	Practical co-op work experience under approved industrial supervision, as set forth in college regulations. 0 - 3 credits, repeatable, maximum 3 credits, (S-U).

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	ENG - Chemical Engineering 19030000	Carlos Rinaldi		7/13/2020
No document changes					
College	Conditionally Approved	ENG - College of Engineering	Heidi Dublin	Conditionally Approved by Curriculum Committee (9/4)-- Update evaluation Link and send back. Please note in comments that this has been taken care of.	9/6/2020
No document changes					
Department	Approved	ENG - Chemical Engineering 19030000	Carlos Rinaldi		9/7/2020
No document changes					
College	Approved	ENG - College of Engineering	Heidi Dublin		9/15/2020
No document changes					
University Curriculum Committee	Recycled	PV - University Curriculum Committee (UCC)	Casey Griffith	Recycled pending review by subcommittee of newly uploaded material	10/20/2020
No document changes					
College	Approved	ENG - College of Engineering	Heidi Dublin		10/22/2020
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			10/22/2020
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					

Step	Status	Group	User	Comment	Updated
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|Modify for request 15176

Info

Request: ECH 4949 0 - 3 credits

Description of request: Practical co-op work experience under approved industrial supervision, as set forth in college regulations.

0 - 3 credits, repeatable, maximum 3 credits, (S-U).

Submitter: Cynthia Sain csain@che.ufl.edu

Created: 11/9/2020 2:08:20 PM

Form version: 11

Responses

Current Prefix

Enter the current three letter code (e.g., POS, ATR, ENC).

Response:

ECH

Course Level

Select the current one digit code preceding the course number that indicates the course level at which the course is taught (e.g., 1=freshman, 2=sophomore, etc.).

Response:

4

Number

Enter the current three digit code indicating the specific content of the course based on the SCNS taxonomy and course equivalency profiles.

Response:

949

Lab Code

Enter the current lab code. This code indicates whether the course is lecture only (None), lab only (L), or a combined lecture and lab (C).

Response:

None

Course Title

*Enter the current title of the course as it appears in the Academic Catalog. There is a 100 character limit for course titles. *

Response:

Co-op Work Experience

Effective Term

Select the requested term that the course change(s) will first be implemented. Selecting "Earliest" will allow the change to be effective in the earliest term after SCNS approval. If a specific term and year are selected, this

should reflect the department's expectations. Courses cannot be changed retroactively, and therefore the actual effective term cannot be prior to SCNS approval, which must be obtained prior to the first day of classes for the effective term. SCNS approval typically requires at least 6 weeks after approval of the course change at UF.

Response:
Earliest Available

Effective Year

Select the requested year that the course change will first be implemented. See preceding item for further information.

Response:
Earliest Available

Requested Action

Indicate whether the change is for termination of the course or any other change. If the latter is selected, all of the following items must be completed for any requested change.

Response:
Other (selecting this option opens additional form fields below)

Change Course Prefix?

Response:
No

Change Course Level?

Note that a change in course level requires submission of a course syllabus.

Response:
No

Change Course Number?

Response:
No

Change Lab Code?

Note that a change in lab code requires submission of a course syllabus.

Response:
No

Change Course Title?

Response:
No

Change Transcript Title?

*If changing the course title a new transcript title is also required. *

Response:
No

Change Credit Hours?

Note that a change in credit hours requires submission of a course syllabus.

Response:
Yes

Current Credit Hours

Response:
1

Proposed Credit Hours

Response:
Variable

Change Variable Credit?

Note that a change in variable credit status requires submission of a course syllabus.

Response:
Yes

Current Min and Max Credits

Response:
1 - 1

Proposed Min and Max Credits

Response:

0 - 3

Change S/U Only?

Response:
No

Change Contact Type?

Response:
No

Change Rotating Topic Designation?

Response:
No

Change Repeatable Credit?

Note that a change in repeatable credit status requires submission of a course syllabus.

Response:
No

Change Course Description?

Note that a change in course description requires submission of a course syllabus.

Response:
Yes

Current Course Description

Response:
Practical co-op work experience under approved industrial supervision, as set forth in college regulations.

Proposed Course Description (500 characters max)

Response:
Practical co-op work experience under approved industrial supervision, as set forth in college regulations.
0-3 credits, repeatable (S-U). However, a maximum of 3 credits from ECH4949 and ECH 4948

can count towards the Chemical Engineering degree. For example, a student who has earned 1 credit of ECH 4948, can only have 2 credits of ECH 4949 count towards the degree.

Change Prerequisites?

Response:
No

Change Co-requisites?

Response:
No

Rationale

Please explain the rationale for the requested change.

Response:

The rationale for changing the credits from 1 to 0-3 is that the faculty decided that awarding only 1-credit for a whole semester's full-time experiential education was not sufficient. Furthermore, several other UF engineering departments award 3 credits for a semester of industry experiential education. Note that a maximum of 3 credits from ECH4948 and ECH 4949 can count towards the Chemical Engineering degree. For example, a student who has earned 1 credit of ECH 4949, can only have 2 credits of ECH 4948 count towards the degree. The 0 credit option is desired to allow students who have maxed out the 3 credits that count towards the degree, to document further experiential education. It also helps the department monitor the students' experiential training. However, approval as 1-3 credits is fine if the 0 credit option is an issue.

This is consistent what is done with similar courses in other engineering departments. Here is some pertinent information:

Department Course

Credit Pre-req
ABE

ABE 4949 Work Experience in Biological Engineering

1-3

Advisor Approval
BME

BME 3941 Internship Experience in Biomedical Engineering

0-3

BME major
CISE

CIS 4940 Practical Work

1

none

CIS 4949 Co-Op Work in CISE

1

none

EEL/CEN

EEL 4948 Practical Work in Electrical and Computer Engineering 1 Engineering major of junior standing or higher.

EEL 4949 Co-op Work Experience

1

EG major

ENV

ENV 4949 Environmental Engineering Internship/Co-op

1-3

EG major

ISE

EIN 4944 Practical Work in Industrial and Systems Engineering

1-3

4EG classification and EGS 4034 with a minimum grade of C.

MSE

EMA 4949 Co-Op Work Experience

1

one-term industrial employment, including extra work according to a pre-approved outline.

MAE

EAS 4949 Co-op Work Experience

1

Engineering major of sophomore standing or higher.

EML 4945 Practical Work in Mechanical Engineering

1

Engineering major with a 2.0 UF GPA.

EML 4949 Co-op Work Experience

1

Engineering major with a 2.0 UF GPA.

NE

ENU 4944 Practical Work in Nuclear and Radiological Engineering 1-5

none

ENU 4949 Co-op Work Experience

1

4EG classification and one term of industrial employment, including extra work according to a pre-approved outline

New answers as of 11.9.20

- 1) Syllabus refers to allowing full-time or part-time engineering work; are there any students working full-time? Almost all students are working full time, most not taking any other UF courses, some taking 1 or 2 online courses.
- 2) Is this based on the 40 hours of work per week that can result in 2 or 3 credits? The maximum is 1 credit for 140 hours of work (e.g., 40 hours per week for 3.5 weeks or 10 hours per week for 14 weeks), 2 credits for 280 of work (e.g., 20 hours per week for 14 weeks), and 3 credits for 420 hours of work (e.g., 30 hours per week for 14 weeks).
- 3) How many students does the program anticipate will be working 40 hours per week to earn 2 or 3 credits? About 30-50 per year. These are well paid industry work experiences and can pay students more than \$30 per hour in some cases
- 4) Will they be performing this work only, or might they be enrolled in other courses/credits? Most are not taking any other UF courses, some are taking 1 or 2 online courses.
- 5) How many hours per week have students been working in the past to earn 1 credit? Most 40 hours per week, we are trying to increase this to up to 3 credits (student's choice as they may not need that many)
- 6) How does the 1-2 page report determine satisfactory grade and why is it the same requirement for variable credits? The grade is S/U. The report must answer specific questions on the knowledge gained, on how they used what they have learned in previous UF courses etc. Most students are not allowed to disclose details about their specific projects, and this report provides the information needed to decide on whether to award a satisfactory grade or not. It is not the same requirement for 1-3 credits, the number of hours worked (each credit requires 10 hours per week for 14 weeks or equivalent) determines the maximum number of credits they qualify for.
- 7) Syllabus says no prereqs or coreqs. This was a mistake. The prerequisite is Engineering Major, and it will remain so. As you can see from the information provided above, almost all similar engineering courses are 4000 level without specific course pre-requisites. However, a de facto prerequisite is approval by the Undergraduate Coordinator. If the Committee so desires, we can add this as an additional pre-requisite (as ABE4949 does).
- 8) Evaluation info on syllabus should be changed to current GatorEvals info. This has been done (see attached course syllabi).
- 9) Please provide information regarding how credits are decided and how the students are assessed. This has been answered above

Old answers: So to address some questions:

- 1) Syllabus refers to allowing full-time or part-time engineering work; are there any students working full-time? Almost all students are working full time, most not taking any other UF courses, some taking 1 or 2 online courses.
- 2) Is this based on the 40 hours of work per week that can result in 2 or 3 credits? The maximum is 1 credit for 140 hours of work (e.g., 40 hours per week for 3.5 weeks or 10 hours per week for 14 weeks), 2 credits for 280 of work (e.g., 20 hours per week for 14 weeks), and 3 credits for 420 hours of work (e.g., 30 hours per week for 14 weeks).
- 3) How many students does the program anticipate will be working 40 hours per week to earn 2 or 3 credits? About 30-50 per year. These are well paid industry work experiences and can pay students more than \$30 per hour in some cases
- 4) Will they be performing this work only, or might they be enrolled in other courses/credits? Most are not taking any other UF courses, some are taking 1 or 2 online courses.
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7) Syllabus says no prereqs or coreqs. This is a 4000-level course. There should be a prereq. As you can see from the information provided above, almost all similar engineering courses are 4000 level without meaningful pre-requisites. We are therefore not petitioning to change this.

8) Evaluation info on syllabus should be changed to current GatorEvals info. This will be done.

9) Please provide information regarding how credits are decided and how the students are assessed. This has been answered above.

The rationale for changing the credits from 1 to 0-3 is that the faculty decided that awarding only 1-credit for a whole semester's full-time experiential education was not sufficient. Furthermore, several other UF engineering departments award 3 credits for a semester of industry experiential education. Note that a maximum of 3 credits from ECH4948 and ECH 4949 can count towards the Chemical Engineering degree. For example, a student who has earned 1 credit of ECH 4949, can only have 2 credits of ECH 4948 count towards the degree. The 0 credit option is desired to allow students who have maxed out the 3 credits that count towards the degree, to document further experiential education. It also helps the department monitor the students' experiential training. However, approval as 1-3 credits is fine if the 0 credit option is an issue.

This is consistent what is done with similar courses in other engineering departments. Here is some pertinent information:

Department	Course	Credit	Pre-req
ABE	ABE 4949 Work Experience in Biological Engineering	1-3	Advisor Approval
BME	BME 3941 Internship Experience in Biomedical Engineering	0-3	BME major
CISE	CIS 4940 Practical Work	1	none
	CIS 4949 Co-Op Work in CISE	1	none
EEL/CEN	EEL 4948 Practical Work in Electrical and Computer Engineering junior standing or higher.	1	Engineering major of
	EEL 4949 Co-op Work Experience	1	EG major
ENV	ENV 4949 Environmental Engineering Internship/Co-op	1-3	EG major
ISE	EIN 4944 Practical Work in Industrial and Systems Engineering classification and EGS 4034 with a minimum grade of C.	1-3	4EG
MSE	EMA 4949 Co-Op Work Experience employment, including extra work according to a pre-approved outline.	1	one-term industrial
MAE	EAS 4949 Co-op Work Experience sophomore standing or higher.	1	Engineering major of
	EML 4945 Practical Work in Mechanical Engineering with a 2.0 UF GPA.	1	Engineering major
	EML 4949 Co-op Work Experience with a 2.0 UF GPA.	1	Engineering major
NE	ENU 4944 Practical Work in Nuclear and Radiological Engineering	1-5	none
	ENU 4949 Co-op Work Experience and one term of industrial employment, including extra work according to a pre-approved outline	1	4EG classification

So to address some questions:

1) Syllabus refers to allowing full-time or part-time engineering work; are there any students working full-time? Almost all students are working full time, most not taking any other UF courses, some taking 1 or 2 online courses.

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Co-op Work Experience in Chemical Engineering

ECH 4949

Class Periods: N/A

Location: N/A

Academic Term: Fall 2020

Instructor:

Spyros A Svoronos

svoronos@ufl.edu

O: (352) 392-9101 H: (352) 378-1342

Office Hours: Email for appointment, 264 Chemical Engineering Student Center

Course Description

Practical co-op work experience under approved industrial supervision, as set forth in college regulations.

0-3 credits, repeatable (S-U). However, a maximum of 3 credits from ECH4949 and ECH 4948 can count towards the Chemical Engineering degree. For example, a student who has earned 1 credit of ECH 4948, can only have 2 credits of ECH 4949 count towards the degree.

Course Pre-Requisites / Co-Requisites

Engineering Major.

Course Objectives

Part-time or full-time engineering work experience to allow students to gain practical engineering skills and to provide them with the opportunity to receive chemical engineering technical elective credit toward their degree.

Materials and Supply Fees

None

Professional Component (ABET):

N/A

Relation to Program Outcomes (ABET):

Outcome	Coverage*
1. An ability to identify, formulate, and solve engineering problems by applying principles of engineering, science, and mathematics.	
2. An ability to apply both analysis and synthesis in the engineering design process, resulting in designs that meet desired needs.	
3. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	

4. An ability to communicate effectively with a range of audiences	
5. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	
6. An ability to recognize the ongoing need for additional knowledge and locate, evaluate, integrate, and apply this knowledge appropriately.	
7. An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty	

*Coverage is given as high, medium, or low. An empty box indicates that this outcome is not covered or assessed in the course.

Required Textbooks and Software

None

Recommended Materials

None

Attendance Policy, Class Expectations, and Make-Up Policy

Excused absences are consistent with university policies in the undergraduate catalog (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) and require appropriate documentation.

The student will maintain appropriate working hours as determined by her/his supervisor and maintain contact with the Chem E Department Undergraduate Coordinator or the Chem E Academic Advisor.

The student chooses how many credits to register for from a minimum of 0 to a maximum determined by the total work hours. The maximum is 1 credit for 140 hours of work (e.g., 40 hours per week for 3.5 weeks), 2 credits for 280 of work (e.g., 40 hours per week for 7 weeks), and 3 credits for 420 hours of work (e.g., 40 hours per week for 10.5 weeks). These credits count as Chemical Engineering technical elective credits. However, a maximum of 3 credits from ECH4949 and ECH 4948 can count towards the Chemical Engineering degree. For example, a student who has earned 2 credits of ECH 4948, can only have 1 credits of ECH 4949 count towards the degree.

Evaluation of Grade

The grade for this co-op experience (S or U) will be determined by the Chem E Department Undergraduate Coordinator. In order to receive a grade of Satisfactory (S), a 1-2 page report written by the student must be submitted to the Chem E Academic Advisor before the end of the semester. To earn a satisfactory grade, the work performed must have provided engineering technical experience and the report must be well written and organized.

More information on UF grading policy may be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

ADDITIONAL INFORMATION

Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation

“Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.”

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Commitment to a safe and inclusive learning environment

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination.

It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@ufl.edu

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Campus Resources:

Health and Wellness

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling.
<https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
<https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.