

## Cover Sheet: Request 13705

### CHM2096L: Chemistry Lab 2 for Engineers

#### Info

Process	Course New Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Maria Korolev korolev@chem.ufl.edu
Created	3/1/2019 2:45:35 PM
Updated	4/5/2019 7:44:59 AM
Description of request	This is a request to create a new course: CHM2096L.

#### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CLAS - Chemistry 011606000	Alexander Angerhofer		3/1/2019
CTaylor_Letterofsupport.pdf					3/1/2019
College	Conditionally Approved	CLAS - College of Liberal Arts and Sciences	Joseph Spillane	The College Curriculum Committee conditionally approves this request, with the following: please fix the grade scale to show a range.	3/27/2019
No document changes					
Department	Approved	CLAS - Chemistry 011606000	Alexander Angerhofer	Grade scale has been changed to show ranges.	4/4/2019
No document changes					
College	Approved	CLAS - College of Liberal Arts and Sciences	Joseph Spillane		4/5/2019
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			4/5/2019
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

# Course|New for request 13705

## Info

**Request:** CHM2096L: Chemistry Lab 2 for Engineers

**Description of request:** This is a request to create a new course: CHM2096L.

**Submitter:** Maria Korolev korolev@chem.ufl.edu

**Created:** 3/27/2019 12:27:32 PM

**Form version:** 3

## Responses

### Recommended Prefix

*Enter the three letter code indicating placement of course within the discipline (e.g., POS, ATR, ENC). Note that for new course proposals, the State Common Numbering System (SCNS) may assign a different prefix.*

Response:

CHM

### Course Level

*Select the 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:

2

### Number

*Enter the three digit code indicating the specific content of the course based on the SCNS taxonomy and course equivalency profiles. For new course requests, this may be XXX until SCNS assigns an appropriate number.*

Response:

096

### Category of Instruction

*Indicate whether the course is introductory, intermediate or advanced. Introductory courses are those that require no prerequisites and are general in nature. Intermediate courses require some prior preparation in a related area. Advanced courses require specific competencies or knowledge relevant to the topic prior to enrollment.*

Response:

Introductory

- 1000 and 2000 level = Introductory undergraduate
- 3000 level = Intermediate undergraduate
- 4000 level = Advanced undergraduate
- 5000 level = Introductory graduate
- 6000 level = Intermediate graduate
- 7000 level = Advanced graduate

*4000/5000 and 4000/6000 levels = Joint undergraduate/graduate (these must be approved by the UCC and the Graduate Council)*

**Lab Code**

*Enter the lab code to indicate whether the course is lecture only (None), lab only (L), or a combined lecture and lab (C).*

Response:

L

**Course Title**

*Enter the title of the course as it should appear in the Academic Catalog.*

Response:

Chemistry Lab 2 for Engineers

**Transcript Title**

*Enter the title that will appear in the transcript and the schedule of courses. Note that this must be limited to 21 characters (including spaces and punctuation).*

Response:

Chm Lab 2 for Eng

**Degree Type**

*Select the type of degree program for which this course is intended.*

Response:

Baccalaureate

**Delivery Method(s)**

*Indicate all platforms through which the course is currently planned to be delivered.*

Response:

On-Campus

**Co-Listing**

*Will this course be jointly taught to undergraduate, graduate, and/or professional students?*

Response:

No

**Co-Listing Explanation**

*Please detail how coursework differs for undergraduate, graduate, and/or professional students. Additionally, please upload a copy of both the undergraduate and graduate syllabus to the request in .pdf format.*

Response:

N/A

**Effective Term**

Select the requested term that the course will first be offered. Selecting "Earliest" will allow the course to be active in the earliest term after SCNS approval. If a specific term and year are selected, this should reflect the department's best projection. Courses cannot be implemented 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 2 to 6 weeks after approval of the course at UF.

Response:  
Spring

### **Effective Year**

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

Response:  
2020

### **Rotating Topic?**

Select "Yes" if the course can have rotating (varying) topics. These course titles can vary by topic in the Schedule of Courses.

Response:  
No

### **Repeatable Credit?**

Select "Yes" if the course may be repeated for credit. If the course will also have rotating topics, be sure to indicate this in the question above.

Response:  
No

### **Amount of Credit**

Select the number of credits awarded to the student upon successful completion, or select "Variable" if the course will be offered with variable credit and then indicate the minimum and maximum credits per section. Note that credit hours are regulated by Rule 6A-10.033, FAC. If you select "Variable" for the amount of credit, additional fields will appear in which to indicate the minimum and maximum number of total credits.

Response:  
1

### **S/U Only?**

Select "Yes" if all students should be graded as S/U in the course. Note that each course must be entered into the UF curriculum inventory as either letter-graded or S/U. A course may not have both options. However, letter-graded courses allow students to take the course S/U with instructor permission.

Response:  
No

### **Contact Type**

Select the best option to describe course contact type. This selection determines whether base hours or

headcount hours will be used to determine the total contact hours per credit hour. Note that the headcount hour options are for courses that involve contact between the student and the professor on an individual basis.

Response:  
Regularly Scheduled

- Regularly Scheduled [base hr]
- Thesis/Dissertation Supervision [1.0 headcount hr]
- Directed Individual Studies [0.5 headcount hr]
- Supervision of Student Interns [0.8 headcount hr]
- Supervision of Teaching/Research [0.5 headcount hr]
- Supervision of Cooperative Education [0.8 headcount hr]

Contact the Office of Institutional Planning and Research (352-392-0456) with questions regarding contact type.

### **Weekly Contact Hours**

Indicate the number of hours instructors will have contact with students each week on average throughout the duration of the course.

Response:  
3

### **Course Description**

Provide a brief narrative description of the course content. This description will be published in the Academic Catalog and is limited to 50 words or fewer. See course description guidelines.

Response:  
Laboratory experiments designed to complement CHM2096

### **Prerequisites**

Indicate all requirements that must be satisfied prior to enrollment in the course. Prerequisites will be automatically checked for each student attempting to register for the course. The prerequisite will be published in the Academic Catalog and must be formulated so that it can be enforced in the registration system. Please note that upper division courses (i.e., intermediate or advanced level of instruction) must have proper prerequisites to target the appropriate audience for the course.

Response:  
(CHM2045(C) or CHM2095(C)) & (CHM2045L(C) or CHM2095L(C)) & ENG college

Completing Prerequisites on UCC forms:

- Use "&" and "or" to conjoin multiple requirements; do not use commas, semicolons, etc.
- Use parentheses to specify groupings in multiple requirements.
- Specifying a course prerequisite (without specifying a grade) assumes the required passing grade is D-. In order to specify a different grade, include the grade in parentheses immediately after the course number. For example, "MAC 2311(B)" indicates that students are required to obtain a grade of B in Calculus I. MAC2311 by itself would only require a grade of D-.
- Specify all majors or minors included (if all majors in a college are acceptable the college code is sufficient).
- "Permission of department" is always an option so it should not be included in any prerequisite or co-requisite.

Example: A grade of C in HSC 3502, passing grades in HSC 3057 or HSC 4558, and major/minor in PPHP should be written as follows:

HSC 3502(C) & (HSC 3057 or HSC 4558) & (HP college or (HS or CMS or DSC or HP or RS minor))

**Co-requisites**

Indicate all requirements that must be taken concurrently with the course. Co-requisites are not checked by the registration system.

Response:  
CHM2096

**Rationale and Placement in Curriculum**

Explain the rationale for offering the course and its place in the curriculum.

Response:  
This is the second semester of the chemistry lab for engineers sequence, following CHM2095L which was approved last year. This course is part of the ongoing effort to improve retention of students in engineering by showing the chemistry content in context as it applies to engineering. This course will complement the second semester of general chemistry for engineers, CHM2096.

**Course Objectives**

Describe the core knowledge and skills that student should derive from the course. The objectives should be both observable and measurable.

Response:  
At the end of the course, students should be able to:  
Demonstrate laboratory techniques  
Follow and design experimental procedures  
Record, graph, and interpret data  
Apply chemical concepts to solve problems  
Relate chemistry to real world problems.

**Course Textbook(s) and/or Other Assigned Reading**

Enter the title, author(s) and publication date of textbooks and/or readings that will be assigned. &nbsp;&nbsp;&nbsp;Please provide specific examples&nbsp;&nbsp;&nbsp;to evaluate the course.

Response:  
None. The lab manual will be provided through Canvas.

**Weekly Schedule of Topics**

Provide a projected weekly schedule of topics. This should have sufficient detail to evaluate how the course would meet current curricular needs and the extent to which it overlaps with existing courses at UF.

Response:  
Week 1: No lab during add/drop  
Week 2: Lab 1: Manage the Nitrogen Cycle  
Week 3: Lab 2: Engineer Better Medicines Part 1  
Week 4: Lab 2: Engineer Better Medicines Part 2  
Week 5: Lab 2: Engineer Better Medicines Part 3  
Week 6: Lab 3: Engineer Tools for Scientific Discovery Part 1  
Week 7: Lab 3: Engineer Tools for Scientific Discovery Part 2  
Week 8: Lab 3: Engineer Tools for Scientific Discovery Part 3  
Week 9: Lab 4: Restore and Improve Urban Infrastructure Part 1  
Week 10: Lab 4: Restore and Improve Urban Infrastructure Part 2  
Week 11: Lab 4: Restore and Improve Urban Infrastructure Part 3  
Week 12: Lab Practical

Week 13: Makeup week

Each of the laboratory experiments are designed around one of the National Academy of Engineering Grand Challenges. Each lab is named after these grand challenges. Aside from the first introductory lab, the remaining labs span 3 weeks each.

### **Links and Policies**

*Consult the syllabus policy page for a list of required and recommended links to add to the syllabus. Please list the links and any additional policies that will be added to the course syllabus.*

*Please see: [syllabus.ufl.edu](https://syllabus.ufl.edu) for more information*

Response:

Honor Code: <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

Disabilities Accomodations: <http://www.dso.ufl.edu/drc/>

U Matter, We Care: [umatter@ufl.edu](mailto:umatter@ufl.edu)

Evaluations: <https://evaluations.ufl.edu>

Attendance Policy: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

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

General Education Requirements

### **Grading Scheme**

*List the types of assessments, assignments and other activities that will be used to determine the course grade, and the percentage contribution from each. This list should have sufficient detail to evaluate the course rigor and grade integrity. Include details about the grading rubric and percentage breakdowns for determining grades.*

Response:

Grading Scheme:

Safety Quiz: 5%

Surveys: 5%

Pre-Lab Quizzes: 20%

Lab assignments: 50%

Lab Practical: 20%

92.00%-100% A, 88.00%-91.99% A-, 84.00%-87.99% B+, 80.0%-83.99% B, 76.00%-79.99% B-, 72.00%-75.99% C+, 68.00%-71.99% C, 64.00%-67.99% D+, 60.00%-63.99% D, 0%-59.99% E

### **Instructor(s)**

*Enter the name of the planned instructor or instructors, or "to be determined" if instructors are not yet identified.*

Response:

Maria Korolev

Herbert Wertheim College of Engineering  
Undergraduate Student Affairs

312 Weil Hall  
PO Box 116550  
Gainesville, FL 32611-6550  
352-392-2177  
352-392-9673 Fax  
[www.eng.ufl.edu/students](http://www.eng.ufl.edu/students)

May 26, 2016

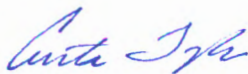
Dr. Kent Crippen  
College of Education  
University of Florida

Dear Dr. Crippen,

On behalf of the Herbert Wertheim College of Engineering, I enthusiastically support the proposal, *ChANgE Chem Lab: Cognitive Apprenticeship for Engineers in Chem Lab*, submitted by the collaborative group from our Colleges of Engineering, Liberal Arts and Sciences, and Education at the University of Florida. This proposal addresses a critical need in engineering education by developing best practices that directly target retention of students in engineering.

Attrition of students from engineering at UF mirrors national statistics that report that students leaving engineering, especially those underrepresented in engineering, do so during the first two years of study. However, students are not exposed to engineering during the first two years as they build a strong foundation in science and mathematics, such as general chemistry. Your project will address this issue directly by providing engineering application to general chemistry with a method that is transferable to other disciplines and easily disseminated. In fact, we would be most eager to pilot examples of your content in our summer freshman bridge program's chemistry instruction as you prepare for launching your efforts in the fall and spring chemistry classes. We will also provide you retention-tracking data from our student database to aid you in the assessment of your methods.

Sincerely,



Dr. Curtis Taylor, Associate Dean  
Herbert Wertheim College of Engineering