Course Change Request

New Course Proposal

Date Submitted: 10/12/18 5:07 pm

Viewing: CHEM 310 : Survey of Organic Chemistry

Last edit: 10/12/18 5:07 pm

Changes proposed by: sslayden

Are you completing this form on someone else's behalf?

No

In Workflow

1. **CHEM Chair**
2. **SC Curriculum Committee**
3. SC Associate Dean
4. Assoc Provost-Undergraduate
5. Registrar-Courses
6. Banner

Approval Path

1. 10/13/18 2:26 am Gerald Weatherspoon (grobert1): Approved for CHEM Chair

Effective Term:	Spring 2019
Subject Code:	CHEM - Chemistry
Course Number:	310
Bundled Courses:	
Equivalent Courses:	
Catalog Title:	Survey of Organic Chemistry
Banner Title:	Organic Survey
Will section titles vary by semester?	No
Credits:	3
Schedule Type:	Lecture

Hours of Lecture or Seminar per week:

Repeatable: May be only taken once for credit, limited to 3 attempts (N3)

Max Allowable Credits: 9

Default Grade Mode: Undergraduate Regular

Recommended Prerequisite(s):

CHEM 271 and CHEM 272, OR

CHEM 211, CHEM 213, CHEM 212, CHEM 214

A minimum "C" grade in each prerequisite course.

Recommended Corequisite(s):

Required Prerequisite(s) / Corequisite(s) (Updates only):

CHEM 271 and CHEM 272, OR

CHEM 211, CHEM 213, CHEM 212, CHEM 214;

A minimum "C" grade in each prerequisite course.

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog Description:

A one-semester survey of the chemistry of organic compounds with emphasis on structure, properties, stereochemistry, nomenclature, synthesis, and reactions of the major functional group families. Applications and compounds of importance to biology and biochemistry stressed. Credit will not be given for this course and CHEM 313; credit will not be given for this course and CHEM 314.

Justification:

The one-semester course will offer an alternative path to select upper division chemistry classes and serve students majoring in fields other than chemistry who wish to take additional chemistry classes. Designed as a bridge between general chemistry for engineers (CHEM 271/CHEM 272) and biochemistry (CHEM 463), this new course will create a straightforward route eliminating the need for an additional 3 semesters of prerequisite coursework. There are also other students who may benefit from a one-semester survey course, such as those majoring in neuroscience, ESP, or geology.

Does this course cover material which crosses into another department? No

Learning Outcomes:

Attach Syllabus

Survey of Organic Chemistry-syllabus-10032018.pdf

Additional Attachments

Staffing:

Organic chemistry faculty (Slayden, Paige, Hatton) have expertise in these areas and are fully qualified to teach this course.

Relationship to Existing Programs:

The course is not allowable for chemistry major credit. It may be allowed for chemistry minor credit, but not in addition to either CHEM 313 or CHEM 314. Students are allowed to take the first semester of Organic Chemistry laboratory, CHEM 315, either concurrently or subsequently. This course is a pre- or co-requisite for CHEM 463.

Relationship to Existing Courses:

This course is a condensed version of Organic Chemistry lecture I and II. It covers the same topics, but omits the detailed mechanisms of reactions and emphasis on compound synthesis. The course does not satisfy the admissions requirements for most medical schools.

Additional Comments:

It will not substitute for the two-semester CHEM 313/CHEM 314 lecture sequence currently required for majors in the College of Science. Students who are not required to take 313, 314 and who might be interested in enrolling in this course could be majoring, for example, in Neuroscience, ESP, Bioengineering, or Geology. Non-degree students may be interested in a shorter course or refresher course.

Reviewer Comments

Key: 15770

Survey of Organic Chemistry

Chemistry 310

Pre-requisite: a grade of C or better in CHEM 211-214 or CHEM 271-272.

Textbook: Principles of Organic Chemistry 1st Edition by Robert J. Ouellette and J. David Rawn, Elsevier, 2015.

Week	Topic	Text Chapter
1	Structure of organic compounds	1
2	Properties of organic compounds	2
3	Alkanes and cycloalkanes	3
4	**Exam 1**	
4, 5	Alkenes and alkynes	4
5, 6	Aromatic compounds	5
6, 7	Stereochemistry	6
8	Nucleophilic Substitution and elimination reactions	7
9	**Exam 2**	
9, 10	Ethers and epoxides	9
10, 11	Alcohols, phenols, and amines	8, 12
11, 12	Aldehydes and ketones	10
12	Carboxylic acids and their derivatives	11, 12
12	**Exam 3**	
13	Carbohydrates	13
14	Amino acids, peptides, and proteins	14
	Comprehensive Final Exam	

Molecular model kit (optional): Many students find a molecular model kit useful when studying organic chemistry, particularly for understanding stereochemistry and other aspects of three dimensional structures. You do not need an expensive kit; a small selection of atoms and bonds is useful. Model kits can be shared in and out of class.

Blackboard will serve as the official electronic course interface (https://mymasonportal.gmu.edu/).

Examinations and Grades

Course Grade:

4 Exams --three exams given during the semester (22% each); the fourth is a comprehensive final exam (34%).

If classes are canceled by the University on a scheduled exam day, the exam will be given at the next scheduled class period after classes resume. Hour exams will not be rescheduled (unless classes have been canceled for an extended period and the instructor notifies you).

Make-up Periods for Final Exams

If the university is closed on an exam day, make-up times will be announced as soon as they are determined and will be posted on the University-wide Class Cancellations page. The last scheduled day of the final exam period is the scheduled make-up day. The Friday, Saturday, and Sunday during the final exam period are also potential make-up days. Students and faculty must be available for the make-up day(s).

Disability Services

If you are a student with a disability and you need academic accommodations, please see me after contacting the Disability Resource Center (DRC) at 703-993-2474. All arrangements for academic accommodations must be initiated through that office.

Honor Code

It is the responsibility of all students to be familiar with the GMU Honor Code. All examinations are closed book, and the use of notes or other written material is not permitted. A periodic table will be provided with the exam. You may use, but not share, molecular models during any exam. You may not use or have in your immediate presence any electronic device.

Academic Policies

The University Catalog is the source of information about all academic policies: http://catalog.gmu.edu/.