Supramolecular Chemistry - Course Syllabus

Course Number: CHEMS 240

Course Title: Supramolecular Chemistry

Academic Semester:	Spring	**Academic Year:**	2015/ 2016
Semester Start Date:	Jan, 24, 2016	**Semester End Date:**	May, 19, 2016

Class Schedule: Wednesday, 1 PM-4 PM

Classroom Number:

Instructor(s) Name(s): Valentin Rodionov
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Teaching Assistant name:
Email:

Office Location: Building 3, 4276
Office Hours: By appointment

COURSE DESCRIPTION FROM PROGRAM GUIDE

Most of the crucial biological processes, such as antigen-antibody recognition and DNA replication, rely on non-covalent bonding and self- assembly. Taking lessons from Nature, chemists have crafted artificial systems capable of specific molecular recognition. Some of these fascinating molecules, such as crown ethers, cucurbiturils, and calixarenes, are pervasive in contemporary chemical literature. This course will examine the topics of non-covalent bonding, molecular recognition, and self-assembly.

COMPREHENSIVE COURSE DESCRIPTION

Most of the crucial biological processes, such as antigen-antibody recognition, and DNA replication, rely on non-covalent bonding, and self-assembly. The most elaborate cellular machines, such as the ribosome, and chaperone proteins, are multimeric non-covalent assemblies. Taking lessons from Nature, chemists have crafted artificial systems capable of specific molecular recognition. Some of these fascinating molecules, such as crown ethers, cucurbiturils, and calixarenes, are pervasive in contemporary chemical literature.

This course that will examine the topics of non-covalent bonding, molecular recognition, and self-assembly. The curriculum shall cover both artificial and biological systems as well as applications.

GOALS AND OBJECTIVES

1. Familiarization with the main topics of current interest in the field of supramolecular chemistry

2. Introduction to the scientific method. Topics include general experiment and study design, effective communication, and literature search skills

REQUIRED KNOWLEDGE

1. Advanced Organic Chemistry (CHEMS320 or equivalent)

2. Introductory Physical Chemistry

REFERENCE TEXTS

1. ACS Scifinder: https://scifinder.cas.org/

2. Web of Knowledge: http://www.webofknowledge.com/

3. Specifically assigned class materials and handouts

METHOD OF EVALUATION

Percentages %	**Graded content** (Assignments, Oral quizzes, Projects, Midterm exam, Final Exam, Attendance and participation, etc)
	Every class period (except introductory) will include time for student presentations. Students shall be delivering presentations based on original research papers assigned during the previous period. The papers in .pdf format will be available in the clas

COURSE REQUIREMENTS

Assignments

1. Weekly oral presentations using an assigned template format
2. Weekly reading/study assignments

Course Policies

Attendance Policy
There is no make-up for missed presentation dates, unless the instructor has been notified in advance of a valid reason for student's absence. A grade of 0 is automatically assigned for any missed presentation.

Academic Honesty Policy

- The highest levels of academic integrity are expected in this class. The code of student conduct will be strictly enforced. Academic dishonesty will result in reductions in grades and/or expulsion from this class and/or the university. The specific rules for this class are as follows:

- Proper attribution is expected when using any information from the scientific literature, textbooks, resources on the web. Lack of proper attribution or verbatim copying of content will result in an automatic zero grade for an entire assignment.

NOTE

The instructor reserves the right to make changes to this syllabus as necessary.