

 <b>FLORIDA ATLANTIC UNIVERSITY</b>	<b>NEW COURSE PROPOSAL</b> <b>Undergraduate Programs</b>		UUPC Approval _____ UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	<b>Department</b>  <b>College</b> <i>(To obtain a course number, contact <a href="mailto:erudolph@fau.edu">erudolph@fau.edu</a>)</i>		
<b>Prefix Number</b>	<i>(L = Lab Course; C = Combined Lecture/Lab; add if appropriate)</i>  <b>Lab Code</b>	<b>Type of Course</b>	<b>Course Title</b>
<b>Credits</b> <i>(Review Provost Memorandum)</i>	<b>Grading</b> <i>(Select One Option)</i>  <b>Regular</b>  <b>Pass/Fail</b>  <b>Sat/UnSat</b>	<b>Course Description</b> <i>(Syllabus must be attached; Syllabus <a href="#">Checklist</a> recommended; see <a href="#">Guidelines</a>)</i>	
<b>Effective Date</b> <i>(TERM &amp; YEAR)</i>			
<b>Prerequisites, with minimum grade*</b>		<b>Corequisites</b>	<b>Registration Controls</b> <i>(Major, College, Level)</i>
<b>*Default minimum passing grade is D-. Prereqs., Coreqs. &amp; Reg. Controls are enforced for all sections of course</b>			
<b>WAC/Gordon Rule Course</b>  Yes                      No  WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to proposal. See <a href="#">WAC Guidelines</a> .		<b>Intellectual Foundations Program (General Education) Requirement</b> <i>(Select One Option)</i>  General Education criteria must be indicated in the syllabus and approval attached to the proposal. See <a href="#">GE Guidelines</a> .	
<b>Minimum qualifications to teach course</b>			
<b>Faculty Contact/Email/Phone</b>		<b>List/Attach comments from departments affected by new course</b>	
<b>Approved by</b>			<b>Date</b>
Department Chair <u>Jerry Haky (via email confirmation)</u>			<u>3-23-20</u>
College Curriculum Chair <u>Jerry Haky (via email confirmation)</u>			<u>3-27-20</u>
College Dean <u>Evonne Rezler (via email confirmation)</u>			<u>3-27-20</u>
UUPC Chair <u>Jerry Haky (via email confirmation)</u>			<u>3-30-20</u>
Undergraduate Studies Dean <u>Edward Pratt (via email confirmation)</u>			<u>3-31-20</u>
UFS President _____			_____
Provost _____			_____

Email this form and syllabus to [mjenning@fau.edu](mailto:mjenning@fau.edu) seven business days before the UUPC meeting.

## **CHM4300: INTRODUCTION TO CHEMICAL BIOLOGY**

**FALL, 2020**

Three Credit Hours

**Instructor:** Dr. Gregg B. Fields

Office: MC17 Room 211

Phone: 561-799-8577

E-mail: [fieldsg@fau.edu](mailto:fieldsg@fau.edu) or [gfields@scripps.edu](mailto:gfields@scripps.edu)

Office hours are Tuesday and Thursday from 12:00-1:30.

**Prerequisites:** Completed Biochemistry 2 and Organic Chemistry 2.

### **Course Objectives:**

An overview of the origins and emerging frontiers of chemical biology. This course develops the fundamental chemistry of molecules found in nature, a quantitative description of their interactions with themselves and each other, and subsequent effects on biological function. Topics include protein design and assembly, chemical genetics, metabolic engineering, and methods in genomics and proteomics research.

Upon successful completion of this course, students should be able to:

1. Recognize, draw and analyze chemical structures of biomolecules.
2. Compare and contrast how biomolecules are synthesized by living cells and by scientists in the lab.
3. Explain, with examples, how chemistry can be used to study biological systems.
4. Explain, with examples, how chemists can manipulate or mimic biological systems to do chemistry.

### **Course Website:**

The course website can be reached at <http://canvas.fau.edu>

### **Textbook:**

There is no textbook for this course. Papers from the literature will be provided through the course's website or directly from the lecturers.

### **Class Lectures:**

Every Tuesday and Thursday from 2:00-3:20 in AD-206 (Jupiter). Course is videoconferenced to PS-226 (Boca Raton) and LE-108D (HBOI).

### **Course Point Breakdown:**

Exams (5 @ 100 points each) = 500 points

### **Makeup Assignments:**

There will be no makeup exams.

**Guaranteed Grade Cut-offs:**

The following point cut-offs for grading may be lowered but will not be raised:

Total Points	Grade	Total Points	Grade
450-500	A	350-379	C
440-449	A-	340-349	C-
430-439	B+	330-339	D+
400-429	B	300-329	D
390-399	B-	290-299	D-
380-389	C+		

**Code of Academic Integrity:**

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the University mission to provide a high-quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see the Code of Academic Integrity in the University Regulations at [http://www.fau.edu/ctl/4.001\\_Code\\_of\\_Academic\\_Integrity.pdf](http://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf).

**Counseling and Psychological Services (CAPS) Center:**

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>.

**Americans with Disabilities Act Amendments Act (ADAAA):**

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at [www.fau.edu/sas/](http://www.fau.edu/sas/).

**University Attendance Policy:**

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

**Classroom Etiquette:**

You are expected to be in your seat and ready for lecture before class begins! Do not come to lecture late and turn off all cell phones. These interruptions are inconsiderate and counterproductive to a learning environment. If you do not come to class fully prepared to focus only on the class material, then you should not come to class. The instructor reserves the right to dismiss any student(s) from class who is/are determined disruptive and/or disrespectful.

**CHEMICAL BIOLOGY**

Fall, 2020

INSTRUCTOR: Dr. Gregg B. Fields

**PRESENTATION SCHEDULE**

<b>Date (approximate)</b>	<b>Presenter</b>	<b>Topic</b>
August 21	Dr. Gregg Fields	Overview of chemical biology
August 23	Dr. Gregg Fields	Chemical synthesis of proteins
August 28	Dr. Gregg Fields	Chemical synthesis of proteins (including ligation strategies)
August 30	Dr. Gregg Fields	Synthesis of DNA
September 4	Dr. Gregg Fields	Recombinant production of proteins (including inteins)
September 6	Dr. Gregg Fields	Unnatural amino acids
September 11	Dr. Gregg Fields	Unnatural amino acids
September 13		EXAM 1
September 18	Dr. Gregg Fields	Mass spectrometry
September 20	Dr. Gregg Fields	Proteomics
September 25	Dr. Gregg Fields	Pharmacology
September 27	Dr. Gregg Fields	Targeting metalloproteinases
October 2	Dr. Gregg Fields	Targeting metalloproteinases
October 4		EXAM 2
October 9	Dr. Predrag Cudic	Protein structure
October 11	Dr. Predrag Cudic	Protein-protein interactions
October 16	Dr. Predrag Cudic	Protein-protein interactions
October 18	Dr. Predrag Cudic	Protein-protein interactions
October 23	Dr. Predrag Cudic	Protein-protein interactions
October 25	Dr. Predrag Cudic	Protein-protein interactions
October 30		EXAM 3
November 1	Dr. Gregg Fields	Posttranslational modifications and cellular interactions
November 6	Dr. Gregg Fields	Signal transduction
November 8	Dr. Gregg Fields	Posttranslational modifications and antibody interactions
November 13	Dr. Thomas Kodadek	Modern methods of drug discovery
November 15	Dr. Thomas Kodadek	Modern methods of drug discovery
November 20	Dr. Gregg Fields	Activity-based protein profiling
November 27	Dr. Gregg Fields	Chemical genetics
November 29		EXAM 4