

 FLORIDA ATLANTIC UNIVERSITY	NEW/CHANGE PROGRAM REQUEST Undergraduate Programs	UUPC Approval <u>10/10/22</u> UFS Approval _____ Banner Posted _____ Catalog _____
	Department Chemistry and Biochemistry College Science	
Program Name Bachelor of Science with Major in Chemistry	<input type="checkbox"/> New Program <input checked="" type="checkbox"/> Change Program	Effective Date (TERM & YEAR) Spring 2022
Please explain the requested change(s) and offer rationale below or on an attachment Add CHM 4915 and CHM 4916 Directed Independent Research in Chemistry, to lists of possible electives in the the ACS-Approved B.S. degree program in chemistry and B.S. in Chemistry (Biochemistry concentration) program. Update catalog language to reflect CHM 4915 is Honors Directed Independent Research in Chemistry instead of Honors Independent Studies. These updates will allow students to document their semester-long work conducting faculty-mentored research on their transcripts and facilitate recognition by obtaining research certificates by graduation.		
Faculty Contact/Email/Phone Tito Sempertegui/tsempert@fau.edu/561-297-2508	Consult and list departments that may be affected by the change(s) and attach documentation	
Approved by Department Chair <u>Andrew Terentis</u> College Curriculum Chair <u>[Signature]</u> College Dean <u>[Signature]</u> UUPC Chair <u>Ethlyn Williams</u> Undergraduate Studies Dean <u>Dan Meeroff</u> UFS President _____ Provost _____	Date 9/22/2022 _____ 9/27/22 <u>9/27/22</u> 10/10/22 10/10/22 _____ _____	

Email this form and attachments to mjenning@fau.edu one week before the UUPC meeting so that materials may be viewed on the UUPC website prior to the meeting.

Honors Program in Chemistry

The Honors Program in Chemistry provides an enriched learning experience for high-performing students. The program focuses on the enhancement of research and communication skills required for scientists. Students gain a positive perspective on working in the interdisciplinary research field becoming prepared to continue their education in a graduate program or within the highly competitive STEM job market.

Admission Requirements

Students enter the Honors Program in Chemistry in one of two ways:

1. Students who have not completed any upper-level courses are eligible to enter the program if they have an overall GPA of 3.5 or higher.
2. Students who have completed upper-level chemistry courses are eligible to enter the program if they have an overall GPA of 3.3 or higher and are nominated by a faculty member.

Students must download and submit a completed application, along with all supporting documents on the checklist, in a single email to honorschemistry@fau.edu.

Standards for Maintaining Active Status

Students admitted to the Honors Program in Chemistry must maintain high academic and ethical standards. Students may be dismissed from the program if they fail to maintain an overall GPA of 3.0, fail to maintain a GPA of 3.3 in their major or violate the code of academic integrity. In the event of withdrawal or dismissal from the Honors Program, credits earned will be applied to a traditional bachelor's degree in chemistry with no penalty.

Honors-Level Enrichment

Honors compacts apply to a total of at least three upper-level chemistry and biochemistry courses. Each of the honors compacts has established criteria including written assignments and an oral presentation. Honors compacts also require individual or group assignments. Chemical Literature, CHM 3060, for 1 credit with a supplemental honors component, is a required course for students in the program.

Capstone Experience

1. The capstone experience consists of at least two semesters of Honors ~~Directed Independent Study~~ **Directed Independent Research in Chemistry**, CHM 4915, for a minimum of 2 credits; and
2. A senior-level thesis must be produced by students taking CHM ~~4905~~ **4915** with an honors designation and they must register for Honors Thesis in Chemistry, CHM 4972, for credits. The thesis has additional criteria for which students should consult qualified research faculty members.

Graduation Requirements

To be eligible for Honors in Chemistry at graduation, students must have:

1. Achieved an overall 3.0 GPA or higher;
2. A Chemistry GPA of 3.3 or higher;
3. Completed a minimum of three (7 credits) upper-level honors compacts; and
4. Completed the Honors Thesis in Chemistry, CHM 4972 for 2 credits, obtaining a grade of "B+" or higher

Chemistry

Bachelor of Science (B.S.)

ACS-Approved Program

In addition to the core curriculum, the ACS-Approved B.S. degree program requires the following courses:

Chemical Literature	CHM 3060	1
Physical Chemistry 1	CHM 3410	3
Physical Chemistry 1 Lab	CHM 3410L	2
Physical Chemistry 2	CHM 3411	3
Physical Chemistry 2 Lab	CHM 3411L	2
Inorganic Chemistry	CHM 3609	3
Inorganic Chemistry Lab	CHM 3609L	1
Bioanalytical Instrumentation	CHM 4139	2
Bioanalytical Instrumentation Lab	CHM 4139L	2
Calculus with Analytic Geometry 1	MAC 2311	4
Calculus with Analytic Geometry 2	MAC 2312	4
General Physics 1	PHY 2048	4
General Physics 2	PHY 2049	4

<i>One of the following:</i>		
Calculus with Analytic Geometry 3	MAC 2313	3
Differential Equations 1	MAP 2302	3

<i>Three of the following:</i>		
Biochemistry 2	BCH 3034	3
Advanced Biochemistry	BCH 4035	3
Environmental Chemistry	CHM 3080	3
Organic Chemistry 3	CHM 4220	3
Introduction to Drug Design	CHM 4273	3
Introduction to Drug Development	CHM 4274C	3
Structural Biochemistry	CHM 4350	3
Materials Chemistry	CHM 4714	3
Directed Independent Study	CHM 4905	3
Directed Independent Research in Chemistry	CHM 4915	1-3
Directed Independent Research in Chemistry	CHM 4916	0-3

Chemistry

Bachelor of Science (B.S.)

Biochemistry Concentration

In addition to the core curriculum, the B.S. in Chemistry (Biochemistry concentration) program requires the following courses:

Biochemistry 2	BCH 3034	3
Biochemistry Lab	BCH 3103L	3
Advanced Biochemistry	BCH 4035	3
Biological Principles	BSC 1010	3
Biological Principles Lab	BSC 1010L	1
Chemical Literature	CHM 3060	1
Physical Chemistry 1	CHM 3410	3
Physical Chemistry 1 Lab	CHM 3410L	2
Calculus with Analytic Geometry 1	MAC 2311	4
Experimental Design and Statistical Inference	PSY 3234	3
General Physics 1	PHY 2048	4 or
College Physics 1	PHY 2053	4
General Physics 2	PHY 2049	4 or
College Physics 2	PHY 2054	4

Minimum of one of the following:		
Environmental Chemistry	CHM 3080	3
Inorganic Chemistry	CHM 3609	3
Inorganic Chemistry Lab	CHM 3609L	1
Bioanalytical Instrumentation	CHM 4139	2
Bioanalytical Instrumentation Lab	CHM 4139L	2
Organic Chemistry 3	CHM 4220	2
Introduction to Drug Design	CHM 4273	3
Introduction to Drug Development	CHM 4274C	3
Structural Biochemistry	CHM 4350	3
Materials Chemistry	CHM 4714	3

Minimum of one of the following:		
General Microbiology	MCB 3020	3
General Microbiology Lab	MCB 3020L	1
Genetics	PCB 3063	3
Cell Biology	PCB 3023	3
Biological Bases of Behavior	PSB 3002	3

Minimum of one of the following:		
Seminar	BSC 4932	1
Directed Independent Study	CHM 4905	1-3

Science Internship	IDS 3941	1-3
Directed Independent Research in Chemistry	CHM 4915	1-3
Directed Independent Research in Chemistry	CHM 4916	0-3

Additional courses for Pre-Professional majors:

Required:		
Biodiversity	BSC 1011	3
Biodiversity Lab	BSC 1011L	1

Suggested Electives		
Comparative Animal Behavior	CBH 4024	3
Medical Shadowing Internship	IDS 3940	1
Human Morphology and Function 1	PCB 3703	3
Human Morphology and Function 1 Lab	PCB 3703L	1 or
Comparative Vertebrate Morphology	ZOO 4690	3
Comparative Vertebrate Morphology Lab	ZOO 4690L	1
Human Morphology and Function 2	PCB 3704	3
Human Morphology and Function 2 Lab	PCB 3704L	1 or
Comparative Animal Physiology	PCB 4723	3
Comparative Animal Physiology Lab	PCB 4723L	1