

## Undergraduate Major Map

**Catalog Year** 2023  
**College / School** Arts, Sciences & Education  
**Major** Biochemistry - BS  
**Track / Concentration**  
**Career Path** Four Year Freshman

<b>Fall Term 2023</b> The major map should be used as a general guide. Please make sure to meet regularly with your academic advisor and use your Panther Degree Audit to track your requirements. Also make sure to refer to the Major Map Endnotes for more specific information.  Math placement is based on your Math Placement Score and classes are to be selected in consultation with an advisor. Pre-Calculus math sequence is MAC1105 and MAC 1147.  Please note: Chemistry placement is also determined by your Math Placement Score, and/or completion of MAC 1105.					<b>Term Hours:</b> 15 <b>Cum GPA:</b> 2
Course Group	Course Required	Course Description	Credit Hours	Course Notes	
UCC First Year Experience	SLS 1501	First Year Exper	1	Satisfies UCC First Year Experience course. (1) See endnotes	
UCC Communication	ENC 1101	Writing and Rhetoric I	3	Satisfies UCC Communication course 1. (1) See endnotes	
UCC Arts			3	May satisfy Gordon Rule with Writing (GRW) and/or Global Learning (GL) requirements. Please speak with your advisor	
General Chemistry	CHM 1045	Gen Chemistry I	3	Also satisfies UCC Natural Science Group 1 course. (1) See endnotes	
General Chemistry	CHM 1045L	Gen Chem Lab I	1	Also satisfies UCC Natural Science Group 1 course. (1) See endnotes	
General Chemistry	MAC 2311	Calculus I	4	Also satisfies UCC Mathematics Group 1 course. (1) See endnotes	

<b>Spring Term 2024</b>					<b>Term Hours:</b> 14 <b>Cum GPA:</b> 2
Course Group	Course Required	Course Description	Credit Hours	Course Notes	
UCC Communication	ENC 1102	Writing and Rhetoric II	3	Satisfies UCC Communication course 2. (1) See endnotes	
UCC Social Science Group One			3	May satisfy Gordon Rule with Writing (GRW) and/or Global Learning (GL) requirements. Please speak with your advisor. (8) POS 2041 or AMH 2020 recommended if Civic Literacy requirement is not met.	
General Chemistry	CHM 1046	Gen Chemistry II	3	Prerequisites: CHM 1045 and CHM 1045L	
General Chemistry	CHM 1046L	Gen Chem Lab II	1		
General Chemistry	MAC 2312	Calculus II	4	Also satisfies UCC Mathematics Group 2 course. (1) See endnotes. Prerequisite: MAC 2311	

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<b>Summer Term 2024</b> By end of Summer 1 student should have 30 credits or more. Use this semester to catch up on coursework and/or satisfy the 9 credits summer requirement (if needed). (3) See endnotes				<b>Term Hours:</b> 4 <b>Cum GPA:</b> 2
Course Group	Course Required	Course Description	Credit Hours	Course Notes
Biochemistry Core	CHM 3120	Intro Analyt Chem	3	Prerequisites: CHM 1046 and CHM 1046L
Biochemistry Core	CHM 3120L	Intr Analyt Chm Lab	1	

<b>Fall Term 2024</b> May use UCC Social Science course to satisfy a Global Learning requirement. (2) See endnotes				<b>Term Hours:</b> 12 <b>Cum GPA:</b> 2
Course Group	Course Required	Course Description	Credit Hours	Course Notes
UCC Social Science Group Two			3	May satisfy Gordon Rule with Writing (GRW) and/or Global Learning (GL) requirements. Please speak with your advisor
General Chemistry	CHM 2210	Organc Chem I	4	Prerequisites: CHM 1046 and CHM 1046L
General Chemistry	CHM 2210L	Org Chem Lab I	1	
General Chemistry	BSC 2010	General Biology I	3	Also satisfies UCC Natural Science Group 1 course. (1) See endnotes
General Chemistry	BSC 2010L	Gen Biology Lab I	1	Also satisfies UCC Natural Science Group 1 course. (1) See endnotes

<b>Spring Term 2025</b> Students are required to select 2 Gordon Rule With Writing (GRW) courses from the UCC. Some courses in Humanities Group 1 may satisfy the GRW requirement.  May use electives to satisfy Global Learning (GL) or Gordon Rule with Writing (GRW) requirements. Please speak with your advisor.14				<b>Term Hours:</b> 14 <b>Cum GPA:</b> 2
Course Group	Course Required	Course Description	Credit Hours	Course Notes
UCC Humanities Group One			3	May satisfy Gordon Rule with Writing (GRW) and/or Global Learning (GL) requirements. Please speak with your advisor
3000-4000 Level Electives			3	Global Learning Discipline Specific course recommended
General Chemistry	BSC 2011	General Biology II	3	Also satisfies UCC Natural Science Group 2 course. (1) See endnotes
General Chemistry	BSC 2011L	Gen Biology Lab II	1	Also satisfies UCC Natural Science Group 2 course Lab. (1) See endnotes
General Chemistry	CHM 2211	Organic Chem II	3	Prerequisites: CHM 2210 and CHM 2210L
General Chemistry	CHM 2211L	Organic Chem Lab II	1	

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<b>Summer Term 2025</b> Use this semester to catch up on coursework and/or satisfy the 9 credits summer requirement (if needed). (3) See endnotes  Students are required to select 2 Gordon Rule With Writing (GRW) courses from the UCC. All courses in Humanities Group 2 will satisfy one of the GRW requirements.				<b>Term Hours:</b> 3 <b>Cum GPA:</b> 2
Course Group	Course Required	Course Description	Credit Hours	Course Notes
UCC Humanities - Group Two			3	May satisfy Gordon Rule with Writing (GRW) and Global Learning (GL) requirements. Please speak with your advisor

<b>Fall Term 2025</b>				<b>Term Hours:</b> 13 <b>Cum GPA:</b> 2
Course Group	Course Required	Course Description	Credit Hours	Course Notes
Biochemistry Core	CHM 4304	Biol Chemistry I	3	Prerequisites: CHM 1046 and CHM 1046L
Biochemistry Core	CHM 4304L	Biol Chem I Lab	1	
General Chemistry	PHY 2048	Physics W/Calculus I	4	Prerequisite/Corequisite: MAC 2311
General Chemistry	PHY 2048L	General Phys Lab I	1	
Biochemistry Core	PCB 3063	Genetics	3	Prerequisite: BSC 2010
Biochemistry Core	PCB 3063L	Genetics Lab	1	

<b>Spring Term 2026</b>				<b>Term Hours:</b> 13 <b>Cum GPA:</b> 2
Course Group	Course Required	Course Description	Credit Hours	Course Notes
Biochemistry Core	CHM 4307	Biol Chemistry II	3	Prerequisite: CHM 4304
Biochemistry Core	CHM 4307L	Bio Chem Lab II	1	
General Chemistry	PHY 2049	Physics W/Calc II	4	Prerequisite/Corequisite: MAC 2312. Also satisfies UCC Natural Science Group 2 course. (1) See endnotes
General Chemistry	PHY 2049L	General Phys Lab II	1	Also satisfies UCC Natural Science Group 2 course Lab. (1) See endnotes
Biochemistry Core	MCB 3020	General Microbiology	3	Prerequisite: BSC 2011/L, CHM 1045/L, CHM 1046/L, CHM 2210/L, CHM 2211/L
Biochemistry Core	MCB 3020L	General Micro Lab	1	

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<b>Summer Term 2026</b> 9 Credit Summer Requirement Met (3)				<b>Term Hours:</b> 6 <b>Cum GPA:</b> 2
Course Group	Course Required	Course Description	Credit Hours	Course Notes
General Electives			3	
Biochemistry Research	CHM 4910L	Under Res Chem	3	Research completed alongside a Faculty Advisor.

<b>Fall Term 2026</b> Apply for Spring Graduation				<b>Term Hours:</b> 13 <b>Cum GPA:</b> 2
<p>College of Arts, Sciences &amp; Education requires 45 credits of 3000 or 4000 level courses, plan accordingly.. Consult with your advisor to find out how many more you need. This varies for every student, depending on which UCC and Biochemistry Core Set Option courses are selected.</p> <p>May use electives to satisfy Global Learning (GL) or Gordon Rule with Writing (GRW) requirements. Please speak with your advisor</p> <p>Biochemistry Core Set Option requires students to take either Set 1 (CHM 3410L &amp; CHM 3411L) or Set 2 (CHM 4130 &amp; CHM 4130L)</p>				
Course Group	Course Required	Course Description	Credit Hours	Course Notes
Biochemistry Core	CHM 3410	Phys Chem I	4	Prerequisite: CHM 3120/L, MAC 2312, PHY 2049/L. Prerequisite or Corequisite: CHM3410L.
General Electives			3	
Option A	CHM 3410L	Phys Chm Lab I	1	Options: CHM 3410L
General Electives			3	
3000-4000 Level Electives			2	

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<b>Spring Term 2027</b> Students are required to take a nationally-normed chemistry examination in their last semester before graduation.  May use electives to satisfy Global Learning (GL) or Gordon Rule with Writing (GRW) requirements. Please speak with your advisor.  Biochemistry Core Set Option requires students to take either Set 1: CHM 3410L AND CHM 3411L OR Set 2: CHM 4130 AND CHM 4130L				<b>Term Hours:</b> 13 <b>Cum GPA:</b> 2
Course Group	Course Required	Course Description	Credit Hours	Course Notes
Biochemistry Core	CHM 3411	Phys Chem II	4	Prerequisite: CHM3410
Senior Seminar	CHM 4930	Senior Seminar	1	Can only be completed in final semester of the program with advisor permission.
Option A	CHM 3411L	Phys Chem Lab II	2	Take CHM 4130 and CHM 4130L OR take CHM 3411L, if CHM 3410L was completed in the Fall
Biochemistry Elective			3	Students may not use CHM 3410L & CHM 3411L or CHM 4130 & CHM4130L if they were used to complete the Set Option Requirement
General Electives			3	

<b>Summer Term 2027</b> Use this semester to catch up on coursework and/or Satisfy the 9 Credits Summer Requirement (if needed). (3) See Endnotes	<b>Cum GPA:</b> 2
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### General Requirements

\*Critical Indicator is the minimum grade indicated in specific courses to demonstrate proficiency and progress in major. Earning less than the minimum grade is a trigger for a conversation with advisor\*

#### GENERAL UNIVERSITY REQUIREMENTS

See your Panther Degree Audit (PDA) for a real-time update on your academic career progress and additional information on University and major requirements at <http://my.fiu.edu>.

(1) UCC: Students must meet the University Core Curriculum (UCC) requirements. For a full list of UCC courses, see <http://undergrad.fiu.edu/advising/curriculum.html> or speak with your advisor. UCC courses must be taken for a letter grade and may not be taken at other institutions without permission from the Dean of Undergraduate Education.

(2) Global Learning: Freshmen entering FIU Summer B 2010 or later must take at least two Global Learning (GL) designated courses at FIU. See <http://goglobal.fiu.edu>. Courses must be: - 1 GL foundation course (from the University Core Curriculum), - 1 GL discipline-specific course (3000/4000 level)

(3) Summer Hours Requirement: All students entering FIU or any university within the State University System (SUS) of Florida with fewer than 60 credit hours are required to earn at least nine credit hours prior to graduation by attending one or more summer terms at a university in the SUS.

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(4) Gordon Rule: All Gordon Rule courses (i.e., English Composition, Humanities with Writing, and Quantitative Reasoning) must be completed with a minimum grade of "C." This requirement must be fulfilled within the first 60 credits.

(5) Foreign Language Requirement for Graduation (FLENT/FLEX): A student who did not complete two years of the same foreign language in high school or at a post-secondary institution must successfully complete 8-10 credit hours of instruction in one foreign language prior to graduation. Exceptions include appropriate CLEP, AP, IB, TOEFL, or transfer credit. Contact your advisor for more information.

(6) Postsecondary Civic Literacy (CL): Students must demonstrate understanding of American Civics via completed course work or test credit. Consult with an advisor to determine the best option for satisfying this requirement.

Grades: Students must earn a grade of "C" or higher in all courses required for the major. A grade of "C-" or lower is not acceptable in any required course.

College of Arts, Sciences & Education: BS in Biochemistry specific requirements

1. Biochemistry core consists of 38-40 units.
2. Students are required to take a nationally-normed chemistry examination in their last semester before graduation.

\*\*Students who plan to pursue a career in research should plan to start their independent study project no later than the beginning of the third year and are encouraged to begin sooner. Students interested in Pre-Medical, Dentistry, Veterinary, Optometry, Pharmacy Curricula should consult the Pre-Health advisors at 305-348-0515