

LOYOLA UNIVERSITY CHICAGO
B.S. IN BIOINFORMATICS
NEW (F2023) MAJOR SAMPLE SCHEDULE

FALL	SPRING
YEAR 1	
General Biology (BIOL 101) (3) Chemical and Structural Properties (CHEM 160) ¹ (3) Applied Calculus I (MATH 131) ² (3) CORE: College Writing Seminar (3) CORE: Theology and Religious Studies Tier 1 (3) UNIV 101 (1) 16 Credit Hours	Chemical Reactivity I (CHEM 180) ³ (3) Intro to Computing Tools (COMP 141) (3) Applied Calculus II (MATH 132) ⁴ (3) CORE: Ethics (3) CORE: Theology and Religious Studies Tier 2 (3) 15 Credit Hours
YEAR 2	
Genetics (BIOL 282) (3) Genetics Lab (BIOL 283) (1) Chemical Reactivity II (CHEM 240) ⁵ (3) Intro to Programming (MATH 215) ⁶ (3) CORE: Historical Knowledge Tier 1 (3) CORE: Philosophical Knowledge Tier 1 (3) 16 Credit Hours	Quantitative Methods in Chemistry (CHEM 260) ⁷ (3) Data Structures & Algorithms (COMP 231) (3) CAS Elective (3) CORE: Historical Knowledge Tier 2 (3) CORE: Philosophical Knowledge Tier 2 (3) 15 Credit Hours
YEAR 3	
Bioinformatics (BIOL 388) (3) [Fall only] Biochemistry (CHEM 361) (3) CAS Elective (3) CAS Language Requirement 1 (3) ⁸ CORE: Literary Knowledge & Experience Tier 1 (3) 15 Credit Hours	Introduction to Biostatistics (STAT 335) (3) Genomics (BIOL 387) (3) ⁹ [Spring only] Undergraduate Capstone (BIOI 397/398/399) ¹⁰ (1+) CAS Language Requirement 2 (3) CORE: Literary Knowledge & Experience Tier 2 (3) CORE: Societal and Cultural Knowledge Tier 1 (3) 16+ Credit Hours
YEAR 4	
Exploring Proteins (BIOI 365) (3) ^{11,12} [Fall only] B.S. Bioinformatics COMP elective (3) ¹² or Molecular Biology Lab (BIOL 390) ¹² (4) CAS Elective (3) CORE: Societal and Cultural Knowledge Tier 2 (3) 12 (or 13) Credit Hours	Computational Biology (COMP 383) (4) [Spring only] Quant. Bioinformatics (STAT 337) ¹³ (3) [Spring only] CAS Elective (3) CAS Elective (3) CORE: Artistic Knowledge and Experience (3) 16 Credit Hours

¹ Starting Fall 2023, Chemistry requirements begin to phase out the CHEM 101 curriculum track. Students that have already pursued these requirements may continue on the old curriculum track. Freshmen and new majors will take CHEM 160; ² May substitute with MATH 161; ³ Replaces CHEM 102; ⁴ May substitute with MATH 162; ⁵ Replaces CHEM 223; ⁶ May substitute with COMP 170 (offered fall, spring and summer); ⁷ Replaces CHEM 224; ⁸ Language competency required at the 102 level by course or [test](#); ⁹ May substitute with Metagenomics (BIOL 392) [Fall only]; ¹⁰ the Research Survey course (BIOI 397), Research Internship (BIOI 398), and Research (BIOI 399) can be taken any semester offered and Internship/research can be repeated with each semester 1-4 credit hours (although only 1 credit hour is required for the major); ¹¹ May substitute with Proteomics (CHEM 365) [Spring Odd Years only]; ¹² Choose 2 of 3: (1) Exploring Proteins (BIOI 365) [Fall only] or Proteomics (CHEM 365) [Spring Odd Years only], (2) Machine Learning (COMP 379) [Fall only] or Database Programming (COMP 353), (3) Molecular Biology Lab (BIOL 390); ¹³ May substitute with STAT 336.

Note: College of Arts & Sciences requires 2 Writing Intensive (WI) courses; many CORE Tier 2 courses are available as WI; Molecular Biology Lab (BIOL 390) is also WI. Note, only 1 WI course can be taken in a single semester.

Note: 120 credit hours are required for graduation.