

|  | **School of Theoretical and Applied Science** |
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**Bioinformatics**

Recommended Four-Year Plan (Fall 2021)

The recommended four-year plan is designed to provide a blueprint for students to complete their degrees within four years. Students must meet with their Major Advisor to develop a more individualized plan to complete their degree. This plan assumes that no developmental courses are required. If developmental courses are needed, students may have additional requirements to fulfill which are not listed in the plan and may extend degree completion.

**NOTE:** This recommended Four-Year Plan is applicable to students admitted into the major during the 2021-2022 academic year.

| **First Year** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Fall Semester** | **HRS** | **✓** | **Spring Semester** | **HRS** | **✓** |
| **Gen Ed:** HNRS 101- Honors First Year Seminar | 4 |  | BIOL 113 & BIOL 113L-Fundamentals of Biology II Lecture & Lab\* | 4+1 |  |
| Gen Ed: CHEM 116 & CHEM 116L-General Chemistry I Lecture & Lab | 4+1 |  | CHEM 117 & CHEM 117L-General Chemistry II Lecture & Lab\* | 4+1 |  |
| Gen Ed: CRWT 102 - Critical Reading & Writing II | 4 |  | CMPS 130 - Sci Problem Solving-Python | 4 |  |
| BIOL 111 & BIOL 111L-Fundamentals of Biology I Lecture & Lab **WI** | 4+1 |  | Gen Ed: MATH 121-Calculus I\* | 4 |  |
|  |  |  | TAS Pathways Module 1: (PATH-TS1)  Career Assessment/ Advising | **Degree Rqmt.** |  |
| **Total:** | 18 |  | **Total:** | 18 |  |

| **Second Year** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Fall Semester** | **HRS** | **✓** | **Spring Semester** | **HRS** | **✓** |
| CHEM 211 & CHEM 211L -Organic Chemistry I Lecture & Lab \* OR  CHEM 206 & CHEM 206L-Essentials of Organic Chemistry Lecture\* & Lab\* | 4+1 |  | CHEM 213 & CHEM 213L-Organic Chemistry II Lecture\* & Lab\* OR Elective(s) | 4+1 |  |
| CMPS 240-Data Analytics in Python\* | 4 |  | BIOL 332 & BIOL 332L-Genetics Lecture & Lab\* | 4+1.5 |  |
| DATA 101-Introduction to Data Science | 4 |  | PSYC 242-Statistics\* OR  ENSC 345-Research Design & Statistics\* | 4 |  |
| **Gen Ed**: HNRS 110- Honors Social Science Inquiry | 4 |  |  |  |  |
| TAS Pathways Module 2: (PATH-TS2)  Resume/ CV Writing | **Degree Rqmt.** |  | TAS Pathways Module 3: (PATH-TS3)  Interview Preparation | **Degree Rqmt.** |  |
| **Total:** | 17 |  | **Total:** | 14.5 |  |

| **Third Year** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Fall Semester** | **HRS** | **✓** | **Spring Semester** | **HRS** | **✓** |
| BIOL 407 & BIOL 407L-Cell & Molecular Biology Lecture\* & Lab\* **WI** | 4+1.5 |  | BIIN 430-Bioinformatics\* | 4 |  |
| MATH 237-Discrete Structures\* | 4 |  | CMPS 364-Database Design\* | 4 |  |
| Bioinformatics Elective (Group I) | 4 |  | Gen Ed: Gen Ed: Culture & Creativity, OR Systems Sustainability & Society | 4 |  |
| **Gen Ed:** HNRS 201- Honors Studies in the Arts & Humanities | 4 |  | Gen Ed: Historical Perspectives | 4 |  |
| **Total:** | 17.5 |  | **Total:** | 16 |  |

| **Fourth Year** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Fall Semester** | **HRS** | **✓** | **Spring Semester** | **HRS** | **✓** |
| Bioinformatics Elective (Group II) | 4 |  | BIIN 450-Advanced Bioinformatics\* **WI** | 4 |  |
| **Gen Ed**: HNRS 220 – Honors Global Awareness Seminar | 4 |  | **Gen Ed:** HNRS 325 – Honors Values and Ethics Seminar | 4 |  |
| Bioinformatics Elective (one semester Honors Research) | 0-1 |  | Bioinformatics Elective (Group I or II or second semester Honors Research) | 1 or 4 |  |
| Bioinformatics Elective (Group II) | 4 |  | Elective(s) | 2-5 |  |
| HNRS 499 – Honors Independent Study (2 or 4 credit)\*\* | 2 |  |  |  |  |
| **Total:** | 14 |  | **Total:** | 14 |  |

**Total Credits Required:** 128 credits

**GPA Required:** 2.0

**\* This course has a pre-requisite. Please refer to the course catalog for information about pre-requisites.**

**WI: Writing Intensive-3 required in the major**

**\*\***While we recommend students take the “Honors Independent Study” (HNRS 499) Fall of their senior year, they are free to take it anytime junior year, senior year, or summer between those two years.