

Course Planning Specifics: Bioinformatics and Computational Biology

Bioinformatics and computational biology majors will need to develop depth of knowledge in biology, computer science, math and chemistry. By the end of the first year, students should try to have completed basic biology, introductory programming, the first two courses of general chemistry (CH 1010, CH 1020), and some math. This can be through a combination of AP or transfer credit, as well as WPI courses. If you received AP credit for courses early in the sequence, you can start at the next course in the sequence. Click [here](#) for the degree requirements in BCB.

If you have little computer science background, start with the non-majors sequence, CS 1004 (offered in A term) and CS 2119 (offered in D term); if you have a strong programming background, you can take CS 1101/CS 2102 instead. We recommend BB 1035 Introduction to Biotechnology for everyone, as it is a project-based course that goes into depth in areas relevant to BCB. We highly recommend taking BCB 100X in B term; this new course introduces the field of Bioinformatics and Computational Biology.

For your other courses, we recommend taking a GPS course in either fall or spring. If you are thinking about double majoring with Biology & Biotechnology or Chemistry/Biochemistry, you should take CH 1010 and CH 1020 in the fall, so that you can take CH 1030 in the spring. Otherwise, chemistry can be delayed until spring, as can math. If you want to take a GPS course along with chemistry in the fall, you can take CS1004 or CS 1101 in A term and BCB 100x in B term.

There are other possible sequences that could also work. Please feel free to contact Liz Ryder, the Program Director, for advice! ryder@wpi.edu

Examples of possible course schedules for your first two terms

<u>A term</u>	<u>B term</u>
CS 1101 or CS 1004	CS 2102
BB 1035	BCB 100X
GPS/HUA/MA/CH	GPS/HUA/MA/CH
PE (optional)	PE (optional)

Course Planning Worksheet: Bioinformatics and Computational Biology

Math Placement Test Result: _____ AP/IB/Transfer Credit: _____

Abbreviation Key for Course Planning Tracker:

- **GPS** = Great Problems Seminar
- **HU**= Humanities Course (includes AB, AR, CN, EN, GN, HI, HU, INTL, ISE, MU, PY, RE, SP, TH, WR)
- **SS** = Social Science Course (includes ECON, ENV, GOV, PSY, SD, SOC, SS)
- **BB** = Biology Course
- **PH**= Physics Course
- **CH**= Chemistry Course

Any courses marked with an asterisk (*) are optional programs, and can be taken in addition to the three courses.

Please Note: The Great Problems Seminars are a two term sequence course. They are also **linked**. This means that when registering for a GPS course in A term, you must register for its second half in B term.

<u>A Term Selections</u>	<u>(Include CRN)</u>	<u>B Term Selections</u>	<u>(Include CRN)</u>
CS 1101 or CS 1004		CS 2102	
BB 1035		BCB 100X	
GPS, HU, MA		GPS, HU, MA	
*Physical Education (1/12 credit unit)		*Physical Education (1/12 credit unit)	
*Military Science (Must be affiliated with an ROTC unit)		*Military Science (Must be affiliated with an ROTC unit)	
Back-ups		Back-ups	