Biology (2018-2019)

Summary of biology courses open to first year students:

Fall 2018:

• BIOLH111A: “Global Change Biology”. J Lunden. (1 credit, Fall semester).

Spring 2019:

• BIOLH102B: “Perspectives in Biology: Genetic Engineering, Farming, and Food”. D. Higgins. (1 credit, Spring semester).

** Note: students wishing to major in biology at Haverford must successfully complete one Natural Science credit, which includes a lab experience at Haverford, Bryn Mawr or Swarthmore, as a pre-requisite for taking Bio200 in their sophomore year.

More detailed course information for biology:

1. Courses designed for or appropriate for first year students and being offered in 2018-2019.

“PERSPECTIVES IN BIOLOGY” COURSES ARE 100 LEVEL COURSES FOR STUDENTS NOT INTENDING TO MAJOR IN THE SCIENCES. NO PREREQUISITES; NO LABORATORY EXPERIENCE; ENROLLMENT LIMITED TO 30 FOR BIOLH111A AND BIOL102B.

Fall Semester:
(1 credit, Fall semester).
Description:
The primary objective of this course is to gain a broad understanding of the mechanisms by which plants, animals, and ecosystems are responding to global change and to appreciate the links between physical, chemical, and biological systems and anthropogenic (human) activities. Intended for non-majors.
Enrollment Limit: 30. Lottery Preference(s): First year students and sophomores, 15 spaces reserved for first year students.

Spring Semester:
BIOLH118B: “Genetic Engineering, Farming, and Food”. D Higgins.
(1 credit, Spring semester).
Description: TBA
Enrollment Limit: 30. Lottery Preference(s): First year students and sophomores, 15 spaces reserved for first year students.

2. Courses recommended to students planning to major in Biology

It should be noted that the major tracks are quite different between Haverford and Bryn Mawr, and it can be difficult to move between the two departments. Students may choose between these complementary approaches to the study of living systems but should consider their selection carefully.

Students interested in majoring in Biology at Haverford should build a strong intellectual foundation in the Natural Sciences. The first Biology course in the major track is Bio200, Evolution, Genetics & Genomics, typically taken in the sophomore year. The prerequisite for Bio200 is successful completion with a grade of 2.0 or higher of a minimum of one natural science credit (which includes a laboratory experience) at Haverford, Bryn Mawr or Swarthmore College. There is no placement out of this requirement. While most of our majors enroll in chemistry during their freshman year, that is no longer a pre-requisite so that introductory courses with include a laboratory experience in physics, geology (at Bryn Mawr) or computer science are now alternative routes into Bio200. It is important that Faculty advisors and UCAs be aware of the Bio200 prerequisite since it occasionally causes confusion. Finally, students receiving lower than a 2.7 in any first year chemistry course are not advised to take Bio200 and Chem222 at the same time.

3. Schedule of a typical biology major (a full listing of major requirements for Biology is published in the college catalog):

First Year: Enrollment in a minimum of one natural science credit (which includes a laboratory experience) at Haverford, Bryn Mawr or Swarthmore College as a prerequisite for Bio200 in the Sophomore year. Students should also consider taking mathematics while their high school experiences are still fresh.

Second Year: Bio200: Evolution, Genetics & Genomics and Bio201: Molecules, Cells & Organisms, the first Biology courses of the major track

Third Year: Bio300/3012 Junior Superlab and
Four half-semester 300-level advanced topics courses

Fourth Year: One half-semester Senior Seminar, based on the primary literature from courses numbered at the 450/475 level; no substitution permitted. Students are encouraged to take more than one of these courses to enhance their Biology experience.
A minimum of two 400-level Senior Research Tutorial credits, generally taken over both semesters of the senior year, including active participation in weekly lab meetings and submission of a notebook and a thesis describing
the progress and results of the project. The tutorial may be taken for single or
double credit each semester.

**Senior Department Studies, Biology 499**, a full year, ½ credit, speakers’
series.

**Note:** A minimum of one semester of chemistry and one advanced class (200-level or
higher) in a natural sciences department other than Biology are additional requirements of
the major and must be completed prior to graduation.

4. **Study Abroad as a Biology Major**
The flexibility of the Biology major track allows for students to study abroad in their junior
year should they wish to do so. About 1/3 of our major class participate in a study abroad
experience (either Fall or Spring semester or occasionally the full year). Students sometimes
opt to devote their study abroad experience to the study of non-major courses while others
include some biology courses. Students interested in studying abroad as biology majors
should consult with the study abroad advisor upon completion of Bio200.

5. **First Year courses in Bryn Mawr Biology Department**
The Bryn Mawr Biology Department offers introductory thematic courses that lead into their
major curriculum. Students wishing further detail should contact the Chair of the Bryn Mawr
Biology Department.

Note: First year students who take Bryn Mawr 100-level biology classes and want to
continue their biology education at Haverford should follow those classes with Bio200 in their
sophomore year. This is particularly important if they intend to major at Haverford (**Bryn
Mawr Biology 100-level classes do not substitute for Haverford Bio 200 in Haverford's major
sequence.**)

6. **Pre-Medical Requirements**
Currently, Biology 200/201 fulfills pre-medical requirements. Students interested in careers
in medicine should attend meetings held at the start of the year by Jodi Domsky and arrange
an advising session with her during their first semester. **Majoring in Biology or the Natural
Sciences is not required for successful application to medical school.** Note that
Perspectives in Biology courses at the 100-level do not have labs and therefore do not
satisfy medical school admission requirements.

7. **Concentrations and Minors**
Many Haverford Biology majors participate in the **Concentration in Biochemistry or
Biophysics**, the **Concentration in Scientific Computing** the **minor in Neuroscience**, the
**minor in Environmental Studies**, as well as the minor in **Health Studies**. The Department
also advises on the **4+1 Bioengineering Affiliated Program with the University of
Pennsylvania**. Concentration/minor requirements are described in the course catalog. First
year students interested in concentrations/minors/affiliated programs are advised strongly to
meet with an appropriate program coordinator as soon as possible to ensure fitting all of the
necessary requirements into their course schedules.

Questions about any biology-related information should be directed to the Chair of the
Haverford Biology Department (Robert Fairman, rfairman@haverford.edu).