Biology (2013-2014)

1. Courses designed for or appropriate for first year students and being offered in 2013-2014.

“PERSPECTIVES IN BIOLOGY” COURSES ARE FOR STUDENTS NOT INTENDING TO MAJOR IN THE SCIENCES. OFFERED AS SEMESTER-LONG COURSES THIS YEAR. NO PREREQUISITES; NO LABORATORY EXPERIENCE; ENROLLMENT LIMITED TO 30

Fall Semester:

131a. Perspectives in Biology: Poisons, Plagues, Pollution and Progress J. Melo
Description:
This class will focus on the various nodes of intersection between poisons – found in nature and man-made – and the history of human misery. We will review the catastrophic effects on human physiology of the plagues that have cycled through our population every few decades, often decimating our numbers as a species, as well as modern modes of poisoning at our own hands – such as the Gulf of Mexico oil spill of 2010 and subsequent mop-up effort. We will also discuss future scenarios in which our species will have to face the action of environmental poisons, and the various defense strategies our bodies (and our technology) will deploy in hopes of survival. Enrollment limited to 30. Prerequisite: Lottery preference to Freshmen and Sophomores. Does not count toward the major.

Spring Semester: C. Jang

Another semester-long Perspectives class is planned but no course description is available yet. Enrollment limited to 30. Prerequisite: Lottery preference to Freshmen and Sophomores.. Does not count toward the major.

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 Biology 200, Cell Structure and Function, taken in the sophomore year. The prerequisite for Bio 200 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 Biology 200. It is important that Faculty advisors and UCAs be aware of the Biology 200 prerequisite since it occasionally causes confusion.

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 Biology 200 in the Sophomore year. Students should also consider taking Mathematics while their high school experiences are still fresh.

Second Year: Bio200a,b Cell Structure and Function, the first Biology course of the major track

Third year: Bio300 a,b. 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 350/360 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. **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 (Professor Tamara Davis, tmdavis@brynmawr.edu, phone: 610-526-5065).

**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 Bio 200 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.)

5. **Pre-Medical Requirements**
   Currently, Biology 200a –200b fulfills pre-medical requirements. Students interested in careers in medicine should attend meetings held at the start of the year by Michele Taylor 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.

6. **Concentrations and Minors**
   Haverford Biology majors may 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 newly created program in Health Studies. Concentration/minor requirements are described in the course catalog. First year students interested in concentrations/minors 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 (Philip Meneely, pmeneely@haverford.edu).