

## Biology and Biology/Environmental Science

The graduate program in Biological Sciences offers the Master of Science (M.S.) degree in Biology. An environmental science concentration is available within the M.S. Biology curriculum. The major objective of these programs is to offer a sequence of technical courses in the Biological Sciences for students who plan to become professional biologists or environmental scientists. These programs provide a broad preparation in modern biological specialty areas and an introduction to biological research. Course work and research opportunities take advantage of the Chesapeake Bay and the surrounding area as a model ecosystem in which to study basic principles of Ecology and Environmental Sciences. The thesis plan requires completion of research in some biological specialty, development and approval of a thesis, and oral defense of that work. The comprehensive plan requires successful completion of a master's comprehensive examination covering five distribution areas given below and with an emphasis on environmental topics for the environmental science concentration.

The Environmental Science concentration program is designed to prepare students to pursue professional careers in Environmental Science. This interdisciplinary program includes courses in the allied areas of biological sciences, chemistry, and marine and environmental science. The program is administered through the Department of Biological Sciences in collaboration with the Department of Marine and Environmental Science. This concentration in Environmental Science may be fulfilled through a (1) thesis based plan or (2) comprehensive examination based plan. Under the Comprehensive Examination plan the student is required to also complete one of the following options:

- (a) An approved internship at a national laboratory/appropriate agency
- (b) A research project at another university or
- (c) An in-depth research project here at Hampton University

All students take a set of core courses which develop background in the fundamentals of biology, chemistry, marine and environmental science and in research skills. A tailored program of study may be developed by selection of specialized elective courses. Students entering the program must have met the following minimum undergraduate requirements: two courses in chemistry, two courses in biological science, and one course in calculus. Students deficient in these areas may be admitted but will be required to take appropriate undergraduate courses.

### Degree Plan of Study: Biology

<b>Required Courses: 28 credits</b>			<b>Cr.</b>
BIO	505	Research Problems	3
BIO	650	Research Topics	3
BIO	681	Thesis	4
STA	600	Statistics	3
Selected Elective	Area "A" Course		3
Area A: BIO, 500, 515, 519/619, 540, 517/617, 516/616, 518/618, 621, CHE 509, ESC 510			
Selected Elective	Area "B" Course		3
Area B: BIO 506, 509, 510, 512, 514, 601, 602, 609, 612			
Selected Elective	Area "C" Course		3
Area C: BIO 509, 514, 515, 521, 522, 524, 538, 612, 516/616, 517/617, 618, 621			
Selected Elective	Area "D" Course		3
Area D: BIO 503, 512, 513, 521, 546, 601, 605, 609, 610			
Selected Elective	Area "E" Course		3
Area E: BIO 501, 502, 504, 506, 510, 512, 513, 520, 523, 546, 607, 608, 701			

**Elective Courses: 4 credits**

Elective 4

**Total Credits: 32 (16 credits must be at the 600+ level)**

**Degree Plan of Study: Biology/Environmental Science**

**Required Courses: 19 credits**

			<b>Cr.</b>
BIO	500	General Ecology	3
BIO	650	Research Topics	3
CHE	509	Environmental Chemistry	3
ESC	510	Environmental Toxicology	3
ESC	511	Environmental Science Seminar	1
ESC	616/617	Research Problems I/II	3
STA	600	Statistics	3

**Degree Plan Courses: 11 or 15 credits**

Plan A	Approved Elective	7
	BIO 681: Thesis	4
Plan B	Approved Elective	11
	ESC 613/513: Environmental Science Internship	3
	BIO 702: Comprehensive Examination	1

**Total Credits: 30-34 (15 credits (Plan A) and 17 credits (Plan B) must be at the 600+ level.)**

*This profile sheet should be used in concurrence with your academic catalog and the guidance of your academic advisor.*