

<i>Educational Goals of the Biology Program</i>	<p>Mission Statement Our mission is to provide an outstanding learning environment that integrates education scholarship, and service to actively engage students in the biological sciences and to foster their development as lifelong learners.</p> <p>Content goals</p> <ol style="list-style-type: none"> 1. Our students will understand and apply fundamental biological principles from the major areas of biology (cell and molecular biology, ecology, evolution, genetics, and organismal biology). 2. Our students will acquire in-depth knowledge from the major areas of biology and be able to integrate principles from these areas. 3. Our students will acquire laboratory and field skills necessary to answer biological questions. <p>Process goals</p> <ol style="list-style-type: none"> 1. Our students will develop enhanced critical thinking skills. 2. Our students will develop effective quantitative reasoning skills. 3. Our students will communicate precisely and analytically in written and oral forms. 4. Our students will engage independently and collaboratively in the scientific process.
<i>Biology Faculty & Staff</i>	<p>The research expertise of the faculty include: Ecology, Evolutionary Biology, Organismal Biology, Physiology, Marine Biology, Genetics, Developmental Biology, Cell and Molecular Biology. Many of our faculty have backgrounds in two or more of these areas, adding to the integrative nature of our department. Additionally, we have seven staff members that provide advising, administrative or technical support for the biology degree programs.</p>
<i>Facilities & Resources</i>	<p>The 82,000-square-foot Biology Building, features teaching labs, research labs, environmental control rooms, a seawater lab, image analysis labs, and multimedia lecture halls. The Biology department also maintains a greenhouse on campus that supports teaching and research activities. Additionally, the beautiful, nearby Cascade and Olympic mountains support a rich diversity of aquatic and terrestrial habitats that are frequently utilized for course and individual projects that focus on organismal or ecological aspects of biology. Additionally, our Marine Biology program is enriched through our affiliation with WWU's Shannon Point Marine Center near Anacortes, WA.</p>
<i>Biology Degree Programs</i>	<p>The Biology Department offers a broad-based curriculum with the opportunity for undergraduates to explore specific areas of biology in greater depth through upper-division courses. The department offers both BA and BS degree programs, and students can choose to pursue areas of emphasis in Cell Biology, Ecology, Evolution & Organismal Biology, Secondary Education, or Marine Biology. We also have developed several interdisciplinary majors in conjunction with Anthropology, Biochemistry, Mathematics and Psychology departments. For more detail about biology majors, see the Biology Web Page at: http://www.biol.wvu.edu/biology/programs.shtml.</p>
<i>Phase I & II of the Biology Major</i>	<p>Phase I and II of the Biology Major: The Biology Department has a two-step process for the major. Phase I majors are students who have declared their intent to major in biology and are in the process of completing the introductory biology and chemistry courses: Biol 204, 205, 206 and Chem 121, 122, 123. Phase I majors are assigned a biology faculty adviser and added to the biology majors email listserv. Admission to Phase II is based on performance in the introductory biology and chemistry courses, and a student must have a grade point average (GPA) of 2.9 or above for those courses. If a student does not meet the GPA requirement after he or she has completed all six courses, then the student may repeat one of the courses for the purpose of increasing their GPA. After admission to Phase II, biology majors may take upper-division courses to complete the breadth, depth and elective courses required for their specific degree program.</p>

<p><i>Completing a biology degree in four years</i></p>	<p>Completion of a biology degree in four years can be a challenge if the introductory chemistry and biology series are not started during the freshman year. Students seeking to obtain a BS degree in Biology within a four-year time span should have completed the following courses by the end of their sophomore year: Chem 121, 122, 123; Biol 204, 205, 206; Eng 101; Math 124; 2 quarters of physics or organic chemistry; 18 credits from the non-science section of the General University Requirements. Major omissions from this list will make it difficult to complete this degree in two additional years. Students who are not on target at the end of their sophomore year should meet with their faculty advisor to discuss their degree plans and career goals and to work out a plan to graduate in a timely fashion.</p>
<p><i>Biology Careers</i></p>	<p>Upon completion of a biology degree program, students are well-prepared and competitive to pursue careers in academic biology, education, and applied biology (in government, business and industry). Many of our majors attend graduate school or professional programs in medicine or dentistry. Check the Biology Web Page listed above and the Career Services Center Web Page at http://www.careers.wvu.edu for more information.</p>
<p><i>Contact</i></p>	<p>If you have any questions, please do not hesitate to call or email:</p> <p>Kimberley Kolb Ayre, PhD Kim.Kolb@wvu.edu Phone: (360) 650-6165 FAX: (360) 650-3148</p> <p style="text-align: right;">February 4, 2009</p>

Biology Degree Programs 2008-2009

Biology Majors	Credits	Support Courses	Required Courses	Specific Areas of Study
BS Cell Emphasis	90	37 credits in Chemistry, Physics, & Calculus	53 credits in Biology including 3 upper division lab courses	The cell biology, molecular genetics and genomics of prokaryotic and eukaryotic model organisms
BS Ecology, Evolution, Organismal Biology Emphasis	90	37 credits in Chemistry, Physics, & Calculus	53 credits in Biology including 3 upper division lab courses	The structure, function, ecology and evolution of organisms, with an emphasis on plants and animals
BS General	90	37 credits in Chemistry, Physics, & Calculus	53 credits in Biology including 3 upper division lab courses	This degree program allows students to develop an upper-division curriculum with the help of their faculty advisor.
BS Marine Emphasis	95	42 credits in Chemistry, Physics, Calculus, & Geology	53 credits in Biology including 3 upper division lab courses	The structure and function of marine organisms and their relationship with the environment
BS Secondary Teaching Emphasis	90	37 credits in Chemistry, Physics, & Calculus	53 credits in Biology including 3 upper division lab courses	A broad biology curriculum that prepares student for a teaching endorsement in Biology. Must be accompanied by a teacher preparation program.
BA Biology	74	23 credits in Chemistry, Statistics, & Physics	51 credits in Biology	This degree program offers various options for upper-level coursework.
Combined Majors	Credits	Support Courses	Required Courses	Specific Areas of Study
BS Biology/Anthropology	101-104	34-37 credits of Chemistry, Physics & Calculus	67 credits in Biology and Anthropology	Human biology focus that includes behavioral science for students who want to pursue post-baccalaureate degrees in research or applied health
BA Biology/Anthropology	89	23 credits of Chemistry & Physics	66 credits of Biology & Anthropology	
BA Behavioral Neuroscience	109-110	24 credits of Chemistry & Physics	28 Biology credits & 33 Psychology credits with 24-25 elective credits from Biology and/or Psychology.	Combined major emphasizes neurobiology and psychology of normal and abnormal behavior at the molecular and organismal level
BS Cellular & Molecular/Biochemistry	105	57 credits of Chemistry, Calculus-based Physics, 2 quarters of Calculus	48 credits in Biology including 3 upper division lab courses	This interdisciplinary major focuses on the biochemistry, cell biology, molecular genetics and genomics of prokaryotic and eukaryotic model organisms.
BA Biology/Chemistry Education	105-106	51 credits of Chemistry, Physics & Calculus	54-55 credits in Biology, Chemistry, & Science Education	Leads to state teaching endorsements in Biology and Chemistry. Must be accompanied by the teacher preparation program in Woodring College of Education.
BS Biology/Mathematics	104-105	25 credits of Chemistry & Physics	28 credits in Biology and 57 credits in Mathematics	Combined major brings together a core knowledge of biology with linear algebra, advanced calculus, and methods of computer programming and mathematical modeling