Memo

From: Environmental Science Program

To: Undergraduate Curriculum Committees

Subj: Combined Degree Program

The BS Biology/ MS in Environmental Sciences combined degree program language has been altered to conform with the SACS requirements. The new language is shown in red.

Approved by:

Biology Department Chair: _____

ES Program Chair: _____

College Curriculum Chair: _____

College Dean: _____

UUPC Chair: _____

Undergraduate Studies Dean: _____ 4/6/16

UFS President: _____

Provost: _____

Combined B.S. with Major in Biological Sciences and M.S. with Major in Environmental Science

This combined degree program leads to both a bachelor's (B.S.) in Biological Sciences degree and a master's (M.S.) in Environmental Science degree. It is a laboratory and field intensive curriculum that provides hands-on training for students who are interested in a career in the rapidly expanding field of environmental science. This program also provides excellent preparation for the Integrative Biology Ph.D. and the Geosciences Ph.D. The combined degree program is 156 credits, 120 for the undergraduate degree and 36 for the master's degree. Students complete the undergraduate degree first, taking in their senior year no more than 12 credits of graduate coursework which will be used to satisfy both degrees. See specific program requirements described below.

Prerequisite Coursework for Transfer Students
Students transferring to Florida Atlantic University must complete both lower-division requirements (including the requirements of the Intellectual Foundations Program) and requirements for the college and major. Lower-division requirements may be completed through the A.A. degree from any Florida public college, university or community college or through equivalent coursework at another regionally accredited institution. Before transferring and to ensure timely progress toward the baccalaureate degree, students must also complete the prerequisite courses for their major as outlined in the *Transfer Student Manual*.

All courses not approved by the Florida Statewide Course Numbering System that will be used to satisfy requirements will be evaluated individually on the basis of content and will require a catalog course description and a copy of the syllabus for assessment.

Admission Requirements and Eligibility
Students would take the Graduate Record Exam (GRE) and apply to the B.S./M.S. in their junior year.

In addition to meeting all of the University and College admissions requirements for graduate study, each applicant for the M.S. with Major in Environmental Science must:

1. Have a minimum GRE score of 151 on the verbal section and 148 on the quantitative section, or a cumulative quantitative-verbal score of 1000 or higher on the GRE if taken before October 2011. GRE scores more than five years old will not be accepted.

2. Have a minimum 3.0 average for the last 60 credits of undergraduate work.

3. Obtain approval from the Environmental Science Program.

Students would typically begin taking graduate courses in their senior year that would apply to both their B.S. and M.S. degrees. The program can be completed in five years by allowing 12 credits of graduate-level courses to fulfill course requirements for both the B.S. and M.S. degrees. Students must maintain a minimum GPA of 3.0 to remain in the program.

Curriculum
The core curriculum for students in the combined B.S./M.S. degree program satisfies the requirements for the bachelor of science (B.S.) in Biological Sciences. The difference in this combined program is the emphasis on environmental science and the 12 credits in graduate courses that count toward the M.S. program taken during the senior year.

Core Requirements (47-49 credits)		
Biological Principles and Lab	BSC 1010, 1010L	4
Biodiversity and Lab	BSC 1011, 1011L	4
General Chemistry 1 and Lab	CHM 2045, 2045L	4
General Chemistry 2 and Lab	CHM 2046, 2046L	4
Organic Chemistry 1	CHM 2210	3

Organic Chemistry 2	CHM 2211	3
Methods of Calculus	MAC 2233	3 **or**
Calculus with Analytic Geometry 1	MAC 2311	4
College Physics 1	PHY 2053	4 **or**
General Physics 1	PHY 2048	4
College Physics 2	PHY 2054	4 **or**
General Physics 2	PHY 2049	4
General Physics 1 Lab	PHY 2048L	1
General Physics 2 Lab	PHY 2049L	1
Experimental Design and Statistical Inference	PSY 3234	3 **or**
Introduction to Biostatistics	STA 3173	3
Select at least three of the courses below (the other may be used as an elective)		
Genetics	PCB 3063	4
Molecular and Cell Biology	PCB 4023	3
Principles of Ecology	PCB 4043	3
Evolution	PCB 4674	3

Electives (select at least 21 credits from the list below)		
Biochemistry 1	BCH 3033	3
Vascular Plant Anatomy and Lab	BOT 3223, 3223L	4
Marine Botany and Lab	BOT 4404, 4404L	4
Principles of Plant Physiology and Lab	BOT 4503, 4503L	4
Plant Biotechnology	BOT 4734C	3
Biotechnology 1 Lab	BSC 4403L	2
Biotechnology 2 Lab	BSC 4427L	2
Biology of Cancer	BSC 4806	3
Directed Independent Study	BSC 4905	1-3
Honors Research	BSC 4917	3
Honors Thesis	BSC 4918	3
Special Topics (Model Systems Genetics Lab)	BSC 4930	3
Organic Chemistry Lab	CHM 2211L	2
General Microbiology and Lab	MCB 3020, 3020L	4
Medical Bacteriology	MCB 4203	3
Microbial Ecology	MCB 4603	3
Marine Biodiversity and Lab	OCB 4032, 4032L	4
Marine Biology and Lab	OCB 4043, 4043L	4

Marine Microbiology and Molecular Biology and Lab	OCB 4525, 4525L	4
Marine Ecology and Lab	OCB 4633, 4633L	4
Marine Science	OCE 4006	4
Issues in Human Ecology	PCB 3352	3
Human Morphology and Function 1 and Lab	PCB 3703, 3703L	4
Human Morphology and Function 2 and Lab	PCB 3704, 3704L	4 **or**
Immunology	PCB 4233	3
Molecular Genetics	PCB 4522	4
Comparative Animal Physiology and Lab	PCB 4723, 4723L	4
Reproductive Endocrinology	PCB 4803	3
Cellular Neuroscience and Disease	PCB 4842	3
Practical Cell Neuroscience	PCB 4843C	3
Invertebrate Zoology and Lab	ZOO 2203, 2203L	5
Functional Biology of Marine Animals and Lab	ZOO 4402. 4402L	4
Ornithology and Lab	ZOO 4472, 4472L	4
Comparative Vertebrate Morphogenesis and Lab	ZOO 4690, 4690L	5

Students should consult their faculty advisor concerning additional courses that may be applied to their degree requirements.

Graduate courses that may count toward both the B.S. and the M.S. requirements (12 credits)
Students may select 12 credits from the graduate courses listed below to count for both the B.S. in Biological Sciences and the M.S. in Environmental Science. See the M.S. in Environmental Science degree requirementshere for more courses that count toward the M.S. degree after the B.S. degree is completed.

Colloquium		
Environmental Sciences Colloquium Series (May be taken more than once.)	EVS 6920	1

Core Subject Areas		
Chemistry		
Chemistry for Environmental Scientists	CHS 6611	3
Geographic Information Systems		
Introduction to GIS in Planning	URP 6270	3
Principles of Geographic Information Systems	GIS 5051C	3
Remote Sensing of the Environment	GIS 5038C	3
Modeling		
Modeling Groundwater Movement	GLY 6836	3

Ecological Modeling	EVR 6070	3
Ecological Theory	PCB 6406	3
Statistics		
Environmental Design and Biometry	PCB 6456	4
Conservation and Ecology		
Biogeography	GEO 5305	3
Plants And People	GEO 6317	3
Environmental Restoration	EVR 6334	3
Flora of South Florida	BOT 5155	2
Flora of South Florida Lab	BOT 5155L	2
Coastal Plant Ecology	BOT 6606	2
Coastal Plant Ecology Lab	BOT 6606L	2
Conservation Biology	PCB 6045	3
Marine Ecology	PCB 6317	3
Advanced Ecology	PCB 6046	3
Marine Ecology Lab and Field Studies	PCB 6317L	2
Scientific Communication	BSC 6846	3
Freshwater Ecology	PCB 6307	3
Freshwater Ecology Lab	PCB 6307L	2
Symbiosis	BSC 6365	3
Environmental Physiology	PCB 6749C	4
Marine Geology	GLY 5736C	3
Coastal Environments	GLY 6737	3
Shore Erosion and Protection	GLY 5575C	3
Global Environmental Change	GLY 6746	3
Environmental Geophysics	GLY 6457	3
Natural History of the Indian River Lagoon	OCB 6810	3
Marine Global Change	OCE 6019	3
Seminar in Ichthyology	ZOO 6459	1-2
Marine Invertebrate Zoology	ZOO 6256	3
Marine Invertebrate Zoology Lab	ZOO 6256L	2
Natural History of Fishes	ZOO 6456	3
Natural History of Fishes Lab	ZOO 6456L	2
Seminar in Avian Ecology	ZOO 6544C	1
Policy and Planning		

Human-Environmental Interactions	GEA 6277	3
Geographic Analysis of Population	GEO 5435C	3
Culture, Conservation and Land Use	GEO 6337	3
Coastal Hazards	GLY 6888	3
Introduction to Transportation Planning	URP 6711	3
Environmental Analysis in Planning	URP 6425	3
Environmental Policy and Programs	URP 6429	3
Sustainable Cities	URP 4403	3
Urban and Regional Theory	URP 6840	3
Women, Environment, Ecofeminism, Environmental Justice	WST 6348	3
Environmental Philosophy	PHM 6035	3

Thesis Option
A student curriculum consists of a minimum of 36 credits taken in the following four categories:

Core Subject Areas: 22-28 credits from the core subject areas with at least one course from four different core subject areas.

Electives: No more than 6 credits of electives taken outside the core areas will be counted toward the degree, and no more than 6 credits may be 4000-level courses. No more than 3 credits of Directed Independent Study may be counted toward this degree.

Thesis: 6-12 credits (EVS 6971).

Colloquium: 2 credits or more.

Non-Thesis Option
A student curriculum consists of a minimum of 36 credits taken in the following three categories:

Core Subject Areas: 25-31 credits from the core subject areas with at least one course from four different core subject areas.

Directed Independent Study: 3 credits (EVS 6905) required. Up to 3 additional credits may be taken as electives.

Electives: No more than 6 credits of electives taken outside the core areas will be counted toward the degree.

Colloquium: 2 credits or more.