

Environmental Science (BS/FSU-Teach) Guidelines

College:	<i>Arts & Sciences</i>	Degree:	<i>BS</i>
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Description of Major

FSU-Teach is an innovative approach to teacher education that involves collaboration between scientists, mathematicians and education faculty at Florida State University. In Environmental Science/FSU-Teach, students will develop environmental science knowledge and the knowledge, skill, and experience needed to be an effective science teacher. Science coursework will include courses in meteorology, geology, oceanography, hydrology, and astronomy. The program will pay for tuition for the first two Education/Teaching courses. For more information, see our website, <http://fsu-teach.fsu.edu/>.

This is a double-major only program. FSU-Teach majors are first admitted into their primary, discipline-specific major and must meet the state-wide common program prerequisites for that major, in this case Environmental Science. Later, students apply for admission into a secondary major within the College of Education called Secondary Science or Mathematics Teaching. Upon graduation, students are awarded the B.S. degree with majors in Environmental Science and Secondary Science or Mathematics Teaching. Environmental Science is the interdisciplinary study of environmental systems from a scientific perspective. Drawing principally from the areas of oceanography, geology, meteorology, biology, and chemistry, the Environmental Science program will prepare students in the broader area of geosciences and is an attractive option for students seeking a broader interdisciplinary major with the rigor of mathematics and the physical sciences at its core.

Prerequisite Coursework

30-31 hours

The following are common program prerequisites.

- ***ISC X523C** (3) Research Methods
- **MAC X311** (4) Calculus I
- **BSC X010, X010L** (3,1) Biological Science I, Lab
- **CHM X045, X045L** (3,1-2) General Chemistry I, Lab
- **PHY X048C** (5) General Physics A with Lab
- **BSC X011, X011L** (3, 1) Biological Science II, Lab or **CHM X046,X046L** (3,1) General Chemistry II, Lab
- **GLY X010C** (4) Physical Geology with Lab
- ***SMT 1043** (1) Inquiry Approaches to Teaching (Step 1)
- ***SMT 1053** (1) Inquiry Based Lesson Design (Step 2)

*ISC2523C is a requirement for both majors. Transfer students will be able to take SMT X043 and SMT X053 while enrolled at FSU.

Note: State-wide common prerequisites are always under review. For the most current information and for acceptable alternative courses, visit the “Common Prerequisites Manual.” This is available from the “College Students” section of <http://FACTS.org/>.

Requirements for graduation in the College of Arts & Sciences include

The College of Arts and Science requires proficiency in a foreign language through the intermediate (2220 or equivalent) level or sign language through the advanced (2614 or equivalent) level.

Admission / Continuation Requirements to Major Programs of Study

Students should complete the prerequisite coursework for entrance to the major program of study. Students must also have completed a minimum of 52 hours of credit and at least half the required hours in Liberal Studies, including required English composition and Math, or an A.A degree. No required course in which a student has earned a grade below C- may be applied toward the degree in Environmental Science. A student who has received more than five unsatisfactory grades (U, F, D-, D, D+) in science, statistics, or mathematics courses (and their prerequisites) taken at Florida State University or elsewhere, including repeated unsatisfactory grades in the same course, will not be permitted to graduate with a degree in this major.

Mapping

Mapping is FSU's academic advising and monitoring system. Academic progress is monitored each Fall and Spring semester to ensure that students are on course to earn their degree in a timely fashion. Transfer students must meet mapping guidelines to be accepted into their majors. You may view the map for this major at www.academic-guide.fsu.edu.

Major Program of Studies at FSU

78-83 hours

Required Environmental Science & Collateral courses for the major:

61-63 hours

Environmental Science Core Courses (25-26 hours)

- **GLY X010C** (4) Physical Geology with Lab
- **ISC 3523C** (3) Research Methods*
- **MET 2700** (3) General Meteorology
- **OCE 4008** (3) Principles of Oceanography
- **OCE 4017** (3) Current Issues in Environmental Science or ¹**GLY 3039** (3) Energy, Resources and Environment
- **GLY 4751C** (3) Intro. to Remote Sensing or (if GLY4751 is not available) may substitute **GIS 4043 and GIS 4043L** (3,1) Geographic Information Processing & Systems, Lab
- **GLY 2100** (3) Historical Geology
- **AST 1002** (3) Astronomy

Collateral Courses: 21-22

- **MAC X311** (4) Calculus I
- **BSC X010, X010L** (3, 1) Biological Science I, Lab
- **CHM X045, X045L** (3, 1-2) General Chemistry I, Lab
- **PHY X048C** (5) General Physics A with Lab
- **BSC X011, X011L** (3, 1) Biological Science II, Lab or **CHM X046, X046L** (3, 1) General Chemistry II, Lab

Required Environmental Science Elective Courses

(15 hours)

Select 15 hours. Substitutions for these elective courses require departmental permission but are frequently offered.

Geoscience Elective Courses

- **GLY 3200C** (3) Mineralogy and Crystallography
- **GLY 3610** (3) Paleontology
- **GLY 4511** (3) Sedimentation and Stratigraphy
- **GLY 4820** (3) Principles of Hydrology

- **MET 3103C** (3) Climate Change Science or **ISC 2003** (3) Global Change or **MET 2101** (3) Physical Climatology
- **MET 3220C** (3) Meteorological Computations
- **MET 3300** (3) Intro. to Atmospheric Dynamics
- **MET 4159r** (1-3) Selected Topics in Meteorology
- **EOC 4631** (3) Marine Pollution
- **OCB 4631** (3) Estuarine and Coastal Ecology
- **OCC 4060** (3) Environmental Science Modeling
- **OCE 4930r** (3) Oceanographic Studies (topics vary) – consent of instructor required
- **OCE 4XXX** (3) Environmental Science II. Habitable Planet (new number applied for)
- **OCF 4005** (3) Intro. to Physical Oceanography

Required Courses for the Education Major (29-32 hours)
(26-29 hours beyond the Environmental Science requirements)

- **SMT 1043** (1) Inquiry Approaches to Teaching
- **SMT 1053** (1) Inquiry Based Lesson Design
- **SMT 3100**(3) Knowing and Learning in Science and Mathematics
- **SMT 4301** (3) Classroom Interactions
- **HIS 3505** (3) Perspectives on Science and Mathematics (counts for liberal studies)
- **ISC 3523C** (3) Research Methods*
- **SMT 4664** (3) Project Based Instruction (counts for oral competency)
- **RED 4335** (3) Teaching Reading in the Content Area
- **TSL 4324** (3) ESOL in the Content Area
- [SMT 4945: \(5\) Apprentice Teaching \(student teaching internship\)](#) 6 credits
- **SMT 4930** (1-4) Seminar – variable credit
- ***ISC 3523C** Research Methods counts for both Environmental Science requirements and Education requirements.

Computer Skills Competency 0 hours beyond other requirements

- BSC 2010L (1)

Oral Communication Competency 0-3 hours.

Students must demonstrate the ability to orally transmit ideas and information clearly. This requirement may be met through appropriate high school speech training or with an approved college-level approved course. SMT 4664 will meet this requirement.

Minimum Program Requirements Summary

Total Hrs. Required.....	119
Liberal Studies.....	36
	(20 hours beyond Requirements for the majors)*
Prerequisites.....	All prerequisite coursework is included in major/collateral totals
BS Major Coursework.....	66
BS Collateral Coursework.....	21*
Minor Coursework.....	0 beyond other requirements
Foreign Language.....	12 (depending on placement)
Computer Competency Skills.....	0 beyond major (included in science and education coursework)
Oral Communication Competency.....	0 beyond major (included in education coursework)
Electives to bring total hours to.....	120

*Note: Some coursework required for this major (prerequisite/collateral/major) may also be applied to Liberal Studies or minor requirements.

Remarks

1. A minimum of 45 hours at the 3000 level or above, 30 of which must be taken at this University.
2. Half of the major course semester hours must be completed in residence at this University.
3. The final 30 hours must be completed in residence at this University.

Employment Information

Representative Job Titles Related to this Major: Environmental technician, geoscientist, environmental scientist, hydrologist, general physical scientist, and oceanographer. Some positions may require additional education or training.

Representative Employers: Federal, state, and local governments; NGOs; private employers.