



**2005 – 06 PETITION/PROGRAM SHEET**  
**Degree: Bachelor of Science**  
**Major – Environmental Science (Leading to Secondary Teacher Licensure)**  
[www.mesastate.edu/schools/snsn/environsc](http://www.mesastate.edu/schools/snsn/environsc)

**About This Major . . .**

Our goal is to educate students in the science, protection, and restoration of our natural resources—air, water, land, and ecosystems. Our students develop a solid foundation in biology, chemistry, geology, mathematics, statistics, and communication skills, then apply this knowledge to the study and solution of environmental problems. We balance theory with hands-on practice, and include considerable work outdoors in our spectacular local environment. Individual and group projects are a key part of our courses. We also have students taking part in work done through partnerships with organizations such as the Colorado National Monument and the Colorado Division of Minerals and Geology. Students pursuing this degree must select one of the following three concentrations: Environmental Restoration and Waste Management; Environmental Science; and Environmental Science Education.

This program of study, along with the education courses required for teacher licensure, prepares students to teach general and environmental science in grades 7-12. Students receive broad preparation in biology, chemistry, geology, and physics as well environmental science. Our emphasis is on learning to use environmental topics as a framework for integrating the range of subjects (the sciences in particular) and Colorado content standards covered at each grade level.

The secondary licensure track program is designed to provide teacher education candidates broad-field content knowledge and train them as future teachers for a grades 7-12 State of Colorado endorsement (teaching license) in this content area. A minimum of 75 credit hours of general education and content area coursework must be completed with a minimum GPA of 2.80 before a candidate may apply for admission to the Center for Teacher Education secondary licensure program. Please see the Teacher Education Admission Packet for further information on admissions criteria.

**POLICIES:**

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see your MSC Catalog for a complete list of graduation requirements.
2. You must go to the Registrar’s Office and fill out the “Intent to Graduate” form **at the beginning of the semester prior to graduating.**
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to graduating, no later than September 15 for Spring graduates, February 15 for Fall graduates.**
4. Your advisor will sign and forward the Program Sheet, Intent to Graduate Form, and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar’s Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your “Intent to Graduate” does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you will be required to take a Major Field Achievement Test (Exit Exam).

**NAME:** \_\_\_\_\_ **STUDENT ID #** \_\_\_\_\_

**LOCAL ADDRESS AND PHONE NUMBER:** \_\_\_\_\_  
 \_\_\_\_\_ ( ) \_\_\_\_\_

I, (Signature) \_\_\_\_\_, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

\_\_\_\_\_  
 Signature of Advisor Date \_\_\_\_\_ 20\_\_\_\_

\_\_\_\_\_  
 Signature of Department Head Date \_\_\_\_\_ 20\_\_\_\_

\_\_\_\_\_  
 Signature of Registrar Date \_\_\_\_\_ 20\_\_\_\_

- Must earn 120-121 semester hours and meet the academic residency requirements to earn a baccalaureate degree at Mesa State College.
- Must earn a minimum of 40 semester hours in upper division courses (i.e., 300-level and 400-level courses).
- A cumulative grade point average of 2.8 or higher must be maintained for all courses.
- No grades lower than "C" are accepted in required major courses, restricted electives, and required courses in other sciences.
- When filling out this program sheet a course can only be used once, i.e., no double counting is allowed between categories.
- Excess HPWE courses beyond the two required and pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- All degree requirements must be completed as described. Any exceptions or substitutions must be recommended in advance by the faculty advisor and approved by the Department Head. Courses related to teacher licensure must also be approved by the Teacher Education Dept.
- It is recommended that students work closely with a faculty advisor when selecting courses and scheduling classes prior to registration.
- Students are required to participate in exit examinations or other programs deemed necessary to comply with the college accountability requirement.
- Students must PASS the PLACE or PRAXIS II exam in the content area prior to commencing the internship. Also, ALL other coursework toward the degree must be successfully completed prior to the internship.

**General Education Requirements** (Minimum of 33 semester hours) See the M.S.C. catalog for the list of courses that meet the general education categories.

Course	No.	Credit	Grade	Term	Year	Trns/Subs	Course	No.	Credit	Grade	Term	Year	Trns/Subs
<b>English:</b> ENGL 111 and 112 (6 semester hours, must receive a "B" or better, must be completed by the time the student has 60 semester hours)							<b>Humanities or Social/Behavioral Science:</b> (3 semester hours)						
*ENGL	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
*ENGL	_____	_____	_____	_____	_____	_____	<b>Fine Arts:</b> (3 semester hours)						
*ENGL 129, Honors English, may be substituted for ENGL 111 and ENGL 112. Must earn a grade of "B" or better. May need to take additional electives.							_____	_____	_____	_____	_____	_____	_____
<b>Humanities:</b> (6 semester hours)							<b>Natural Sciences:</b> (minimum 6 semester hours, at least one course must include a lab) Choose two courses from PHYS 101, GEOL 103, GEOL 105, GEOL 111/111L, GEOL 112/112L, GEOL 203						
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	Need a "C" or higher						
<b>Social and Behavioral Sciences:</b> (6 semester hours)							<b>Applied Studies:</b> (3 semester hours)						
PSYC	233	_____	_____	_____	_____	_____	SPCH	102	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	(SPCH 102 Required with a grade of "B" or better)						
(PSYC 233 required with a grade of "B" or better)													

**Other Requirements** (10 semester hours)

<b>Human Performance and Wellness:</b> (3 Semester Hours)							<b>Bachelor of Science Degree Distinction:</b>						
Course	No.	Credit	Grade	Term	Year	Trns/Subs	(7 semester hours) Must earn a "C" or better in both courses.						
HPWA	100	1	_____	_____	_____	_____	Course	No.	Credit	Grade	Term	Year	Trns/Subs
HPWE	_____	1	_____	_____	_____	_____	MATH*	113	4	_____	_____	_____	_____
HPWE	_____	1	_____	_____	_____	_____	STAT	200	3	_____	_____	_____	_____
See the M.S.C. catalog for the list of approved HPWE Activity courses.							*Math 113 or higher level math as approved by advisor						

**Environmental Science – Leading to Secondary Teacher Licensure Major Requirements** (47-48 Semester Hours)

A "C" or higher is required in all courses listed as major requirements.

Course	No.	Credit	Grade	Term	Year	Trns/Subs	Course	No.	Credit	Grade	Term	Year	Trns/Subs
<b>Required Core Courses</b> (22 semester hours)													
ENVS	110	3	_____	_____	_____	_____	ENVS	331	3	_____	_____	_____	_____
ENVS	210	3	_____	_____	_____	_____	ENVS	331L	1	_____	_____	_____	_____
ENVS	312	3	_____	_____	_____	_____	ENVS	340	3	_____	_____	_____	_____
ENVS	312L	1	_____	_____	_____	_____	ENVS	430	3	_____	_____	_____	_____
<b>Restricted Electives</b> (3 semester hours from ENVS courses)							ENVS	492	2	_____	_____	_____	_____
ENVS	_____	_____	_____	_____	_____	_____							

Continued on Page 3



## Environmental Science – Leading to Secondary Teacher Licensure (80 Semester Hours)

A “C” or higher is required in all courses listed as major requirements.

### Required Core Courses (22 semester hours):

ENVS 110 Environmental Science & Technology I  
ENVS 210 Environmental Science & Technology II  
ENVS 312 Soil Properties and Characterization  
ENVS 312L Soil Properties and Characterization  
Lab  
ENVS 331 Water Quality  
ENVS 331L Water Quality Lab  
ENVS 340 Air Quality and Pollution Control  
ENVS 430 Laboratory Methods for Environmental Education  
ENVS 492 Capstone in Environmental Science and Technology

### Restricted Electives (3 semester hours)

3 semester hours from ENVS courses

### Required Courses in Other Sciences

**Biology** – 9-10 semester hours chosen from:

BIOL 105/105L Attributes of Living Systems and Lab  
BIOL 209/209L Human Anatomy and Physiology I and Lab  
BIOL 211/211L Ecosystem Biology and Lab

**Chemistry** – 10 semester hours selected from:

CHEM 121/121L Principles of Chemistry and Lab **and** CHEM 122/122L Principles of Organic Chemistry and Lab  
CHEM 131/131L General Chemistry and Lab **and** CHEM 132/132L General Chemistry and Lab

**Physics** – 3 semester hours minimum chosen from:

PHYS 100 Concepts of Physics  
PHYS 111/111L General Physics and Lab

### Secondary Education Requirements (29 semester hours)

\*Prerequisites: ENGL 111, ENGL 112, SPCH 102, PSYC 233 (all with grade of B or better) and declared major in Environmental Science – Leading to Secondary Teacher Licensure

*EDUC 211 Foundations of Education	2 semester hours	20 Field Experience Hours
EDUC 342 Pedagogy & Assessment: Secondary/K-12	3 semester hours	20 Field Experience Hours
EDUC 343 Teaching to Diversity	3 semester hours	20 Field Experience Hours
EDUC 442 Integrating Literacy Across the Curriculum	5 semester hours	60 Field Experience Hours
EDUC 497 Content Methodology Practicum	3 semester hours	80 Field Experience Hours with EDUC 497D
EDUC 497D Methods of Teaching Secondary Science	1 semester hour	
EDUC 499G Teaching Internship and Colloquium	12 semester hours	600 Field Experience Hours

**Students must PASS the PLACE or PRAXIS II exam in the content area prior to commencing the internship. Also, ALL other coursework toward the degree must be successfully completed prior to internship.**

Students are required to participate in exit examinations or other programs deemed necessary to comply with the college accountability requirement. All degree requirements must be completed as described above. Any exceptions or substitutions must be recommended in advance by the faculty advisor, approved by the Department Head. Courses related to teacher licensure must also be approved by the Teacher Education Department.

**SUGGESTED COURSE SEQUENCING FOR A MAJOR IN  
ENVIRONMENTAL SCIENCE – LEADING TO SECONDARY TEACHER LICENSURE**

**FRESHMAN YEAR**

<b>Fall Semester</b>		<b>Hours</b>	<b>Spring Semester</b>		<b>Hours</b>
ENGL 111	English Composition	3	ENGL 112	English Composition	3
MATH 113	College Algebra	4	STAT 200	Probability and Statistics	3
	General Education Humanities	3		General Education Humanities	3
	General Education Social/Behavioral Science*	3		General Education Social/Behavioral Science	3
	General Education Natural Science	<u>3</u>		General Education Natural Science	<u>4</u>
		16			16

\*PSYC 233 Human Growth and Development required

**SOPHOMORE YEAR**

<b>Fall Semester</b>		<b>Hours</b>	<b>Spring Semester</b>		<b>Hours</b>
ENVS 110	Environmental Science and Technology I	3	ENVS 210	Environ. Science and Technology II	3
CHEM 121	Principles of Chemistry	4		General Education Fine Arts	3
CHEM 121L	Principles of Chemistry Lab	1	BIOL 105	Attributes of Living Systems	4
HPWA 100	Health and Wellness	1	BIOL 105L	Attributes of Living Systems	1
	General Education Applied Studies (SPCH 102 required)	3	CHEM 122	Principles of Organic Chemistry	4
	General Education Social/Behavioral Science or Humanities	<u>3</u>	CHEM 122L	Principles of Organic Chemistry Lab	<u>1</u>
		15			16

**JUNIOR YEAR**

<b>Fall Semester</b>		<b>Hours</b>	<b>Spring Semester</b>		<b>Hours</b>
ENVS 331	Water Quality	3	ENVS 430	Lab Methods in Env. Education	3
ENVS 331L	Water Quality Lab	1	ENVS 492	Capstone in ENVS	2
ENVS 340	Air Quality	3	EDUC 211	Foundations in Education	2
PHYS 100	Concepts of Physics	3	EDUC 342	Pedagogy/Assessment: Secondary/K-12	3
BIOL 209	Human Anatomy and Physiology I	3	EDUC 343	Teaching to Diversity	3
BIOL 209L	Human Anatomy and Physiology II Lab	1		Environmental Science Elective	<u>3</u>
HPWE Activity (2)		<u>2</u>			16
		16			

**SENIOR YEAR**

<b>Fall Semester</b>		<b>Hours</b>	<b>Spring Semester</b>		<b>Hours</b>
ENVS 312	Soil Properties & Characterization	3	EDUC 499G	Teach. Intern/Colloquium: Secondary	<u>12</u>
ENVS 312L	Soil Properties & Characterization Lab	1			12
EDUC 442	Integrating Literacy: Secondary/K-12 Art	5			
EDUC 497	Content Methods Practicum	3			
EDUC 497D	Methods of Teaching Secondary Science	<u>1</u>			
		13			