



2006 – 07 PETITION/PROGRAM SHEET
Degree: Bachelor of Science
Major: Environmental Science
Concentration: Secondary Teaching
www.mesastate.edu/schools/snm/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 as 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.

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. You must be formally accepted into the Teacher Education Program before taking education courses. 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 the MSC Catalog for a complete list of graduation requirements.
2. You must turn in your “Intent to Graduate” form to the Registrar’s Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December.**
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.**
4. Your advisor will sign and forward the Program Sheet 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 may 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 _____ 20____
Date

Signature of Content Advisor _____ 20____
Date

Signature of Department Head _____ 20____
Date

Signature of Registrar _____ 20____
Date

- 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 KINA/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
English: 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)							Humanities or Social/Behavioral Science: (3 semester hours)						
*ENGL	___	___	___	___	___	___	___	___	___	___	___	___	___
*ENGL	___	___	___	___	___	___	Fine Arts: (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.							___	___	___	___	___	___	___
Humanities: (6 semester hours)							Natural Sciences: (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						
___	___	___	___	___	___	___	___	___	___	___	___	___	___
___	___	___	___	___	___	___	___	___	___	___	___	___	___
Social and Behavioral Sciences: (6 semester hours)							Need a "C" or higher						
PSYC	233	___	___	___	___	___	Applied Studies: (3 semester hours)						
___	___	___	___	___	___	___	SPCH	102	___	___	___	___	___
(PSYC 233 required with a grade of "B" or better)							(SPCH 102 Required with a grade of "B" or better)						

Other Requirements (10 semester hours)

Kinesiology: (3 Semester Hours)							Bachelor of Science Degree Distinction: (7 semester hours) Must earn a "C" or better in both courses.						
Course	No.	Credit	Grade	Term	Year	Trns/Subs	Course	No.	Credit	Grade	Term	Year	Trns/Subs
KINE/HPWA	100	1	___	___	___	___	MATH*	113	4	___	___	___	___
KINA/HPWE	___	1	___	___	___	___	STAT	200	3	___	___	___	___
KINA/HPWE	___	1	___	___	___	___	*Math 113 or higher level math as approved by advisor						
See the M.S.C. catalog for the list of approved KINA/HPWE/Selected DANC courses.													

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
Required Core Courses (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	___	___	___	___
Restricted Electives (3 semester hours from ENVS courses)							ENVS	492	2	___	___	___	___
ENVS	___	___	___	___	___	___							

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Course	No.	Credit	Grade	Term	Year	Trns/Subs	Course	No.	Credit	Grade	Term	Year	Trns/Subs
<u>Required Courses in Other Sciences (22-23 semester hours minimum)</u>													
Biology – 9-10 semester hours selected from BIOL 105/105L, BIOL 209/209L, BIOL 211/211L													
BIOL	_____	_____	_____	_____	_____	_____	BIOL	_____	_____	_____	_____	_____	_____
BIOL	_____	_____	_____	_____	_____	_____	BIOL	_____	_____	_____	_____	_____	_____
Chemistry – 10 semester hours selected from CHEM 121/121L and CHEM 122/122L, or CHEM 131/131L and CHEM 132/132L													
CHEM	_____	_____	_____	_____	_____	_____	CHEM	_____	_____	_____	_____	_____	_____
CHEM	_____	_____	_____	_____	_____	_____	CHEM	_____	_____	_____	_____	_____	_____
Physics – 3 semester hours minimum selected from PHYS 100 or PHYS 111/111L													
PHYS	_____	_____	_____	_____	_____	_____	PHYS	_____	_____	_____	_____	_____	_____

Secondary Education Requirements (29 Semester Hours)

Course	No.	Credit	Grade	Term	Year	Trns/Subs	Course	No.	Credit	Grade	Term	Year	Trns/Subs
*Prerequisites: ENGL 111, ENGL 112, SPCH 102, PSYC 233 (all with a grade of B or better), Declared major in Environmental Science– Leading to Secondary Teacher Licensure and formal acceptance to the Teacher Education Program													
EDUC	<u>211*</u>	<u>2</u>	_____	_____	_____	_____	EDUC	<u>497</u>	<u>3</u>	_____	_____	_____	_____
EDUC	<u>342</u>	<u>3</u>	_____	_____	_____	_____	EDUC	<u>497D</u>	<u>1</u>	_____	_____	_____	_____
EDUC	<u>343</u>	<u>3</u>	_____	_____	_____	_____	EDUC	<u>499G*</u>	<u>12</u>	_____	_____	_____	_____
EDUC	<u>442</u>	<u>5</u>	_____	_____	_____	_____							

*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.

GRADUATION INFORMATION

See the “Undergraduate Graduation Requirements” in the Mesa State College catalog for additional graduation information.

A 2.8 Minimum Cumulative Grade Point Average is required.

GENERAL EDUCATION REQUIREMENTS (Minimum of 33 Semester Hours) See current Mesa State College catalog for list of courses that fulfill the requirements below. If one (or more) of the selections below is required in your major, **you must use it to fulfill the major requirement and make a different selection to meet the general education requirement. The courses may not be used to fulfill both requirements.**

English – 6 Semester Hours (Must be **completed** before student has 60 semester hours. Must receive grade of “B” or above.)
ENGL 111 **and** ENGL 112 **or** ENGL 129 (*by permission*)

Humanities – 6 semester hours

Social and Behavioral Sciences – 6 semester hours (PSYC 233 required with a “B” or better.)

Humanities or Social/Behavioral Sciences – 3 semester hours

Fine Arts – 3 semester hours

Natural Sciences – 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

Applied Studies – 3 semester hours (SPCH 102 required with a “B” or better.)

OTHER REQUIREMENTS (10 Semester Hours)

Kinesiology – 3 Semester Hours

Each student must take KINE/HPWA 100 together with two KINA/HPWE/Selected DANC courses. See current catalog for listing.

Degree Distinction – 7 Semester Hours

MATH 113 College Algebra (Or a higher level math as approved by advisor) – 4 semester hours

STAT 200 Probability and Statistics - 3 semester hours

Environmental Science – Leading to Secondary Teacher Licensure (76-77 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 and formal acceptance to the Teacher Education Program.

*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 and the Teacher Education Department.

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

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with their advisor and check the 2 year course matrix on the Mesa State website for course availability.

FRESHMAN YEAR

Fall Semester		Hours	Spring Semester		Hours
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
PSYC 233	Human Growth and Development	3		General Education Social/Behavioral Science	3
	General Education Natural Science	<u>3</u>		General Education Natural Science w/ lab	<u>4</u>
		16			16

SOPHOMORE YEAR

Fall Semester		Hours	Spring Semester		Hours
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
KINE/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

Fall Semester		Hours	Spring Semester		Hours
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>
KINA/HPWE	Activity (2 courses)	<u>2</u>			16
		16			

*These courses are suggested but not required – the options are listed on page 3.

SENIOR YEAR

Fall Semester		Hours	Spring Semester		Hours
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			