2008 – 09 PETITION/PROGRAM SHEET
Degree: Bachelor of Science
Major: Environmental Science and Technology
Concentration: Environmental Restoration and Waste Management
www.mesastate.edu/schools/snsm/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.

The Environmental Restoration and Waste Management concentration focuses on the problem of pollutants in the environment. Students learn the science and technology of how to assess and clean up contaminated sites. Students also learn how to prevent pollution through proper management of air emissions, wastewater discharges, and hazardous wastes.

Over the 15 year history of this program, graduates have an outstanding record (>90%) of landing positions in the environmental profession. Graduates from this concentration obtain work with consulting firms specializing in the investigation and cleanup of hazardous waste sites; as environmental specialists in industry, ensuring that air emissions, wastewater discharges and hazardous wastes comply with government regulations; and as environmental specialists with regulatory agencies.

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 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.

_____ _____ 20_____
Signature of Advisor Date

_____ _____ 20_____
Signature of Department Head Date

_____ _____ 20_____
Signature of Registrar Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:

- Must earn 120 semester hours total and meet the academic residency requirements to earn a baccalaureate degree at Mesa State College.
- 40 upper division credits (i.e., 300-level and 400-level courses).
- 2.00 cumulative GPA or higher in all MSC coursework
- A "C" or higher is required in all courses listed as major requirements.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Program sheets are for advising purposes only. Because a program may have requirements specific to the degree, check with your advisor for additional guidelines, including prerequisites, grade point averages, grades, exit examinations, and other expectations. It is the student's responsibility to be aware of, and follow, all guidelines for the degree being pursued. Any exceptions or substitutions must be approved by the faculty advisor and/or Department Head. Courses related to teacher licensure must also be approved by the Teacher Education Dept.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the Mesa State College catalog for additional graduation information.

GENERAL EDUCATION REQUIREMENTS (31 semester hours)
See the current Mesa State College catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement.

Course	No	Title	Sem.hrs	Grade	Term/Trns

English (6 semester hours, must receive a grade of "C" or better and must be completed by the time the student has 60 semester hours.)

ENGL	111	English Composition	3		
ENGL	112	English Composition	3		

(ENGL 129, Honors English, may be substituted for ENGL 111 & ENGL 112.

Math: (3 semester hours, must receive a grade of "C" or better, must be completed by the time the student has 60 semester hours.)

MATH	151	Calculus I	5*		

*3 credits apply to the General Ed requirements and 2 credits apply to elective credit

Humanities (3 semester hours)

Social and Behavioral Sciences (6 semester hours)

Natural Sciences (7 semester hours, one course must include a lab)

	L				

History (3 semester hours)

HIST					

Fine Arts (3 semester hours)

Course	No	Title	Sem.hrs	Grade	Term/Trns

OTHER LOWER DIVISION REQUIREMENTS (6 semester hours)

Kinesiology (3 semester hours)

KINE	100	Health and Wellness	1		
KINA	1		1		
KINA	1		1		

Applied Studies (3 semester hours)

BACHELOR OF SCIENCE DEGREE DISTINCTION REQUIREMENTS (6 semester hours) Must receive a grade of "C" or better.

STAT	200	Probability and Statistics	3		

Humanities or Social/Behavioral Sciences: (3 semester hours)

ENVIRONMENTAL SCIENCE AND TECHNOLOGY – ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT MAJOR REQUIREMENTS
(65 semester hours) A "C" or higher is required in all courses listed as major requirements.

Required Environmental Science Courses (36 semester hours)

ENVS	104	Environmental Science: Global Sustainability	3		
ENVS	204	Introduction to Ecosystem Management	3		
ENVS	204L	Introduction to Ecosystem Management Lab	1		
ENVS	212	Environmental Health & Safety	2		
ENVS	212L	Environmental Health & Safety Lab	1		
ENVS	221	Science & Technology of Pollution Control	3		
ENVS	221L	Science & Technology of Pollution Control Lab	1		
ENVS	301	Environmental Project Management	2		
ENVS	313	Characterization of Contaminated Sites	3		
ENVS	313L	Characterization of Contaminated Sites Lab	1		
ENVS	331	Water Quality	3		
ENVS	331L	Water Quality Lab	1		
ENVS	340	Applied Atmospheric Science	3		
ENVS	410	Environmental Regulatory Compliance	3		
ENVS	492	Capstone in Environmental Science & Technology	2		
ENVS	499	Internship	4		

Course No	Title	Sem.hrs	Grade	Term/Trns
Required Support Courses (21 semester hours)				
*GEOL 111/111L (3,1) or GEOL 113/113lL (3,1)				
*_____ ____	_____	3	_____	_____
*_____ ___L	_____	1	_____	_____
CHEM 131	General Chemistry	4	_____	_____
CHEM 131L	General Chemistry Lab	1	_____	_____
CHEM 132	General Chemistry	4	_____	_____
CHEM 132L	General Chemistry Lab	1	_____	_____
CHEM 300	Environmental Chemistry	4	_____	_____
ENGL 385	Technical/Professional Writing	3	_____	_____

Restricted Electives (8 semester hours)

Eight semester hours chosen from ENVS 312/312L, ENVS 315, ENVS 321, ENVS 350/350L, ENVS 360/360L, ENVS 396, ENVS 413, ENVS 420/420L, ENVS 431, ENVS 433, ENVS 455/455L, ENVS 496

_____	____	_____	____	_____	_____
_____	____	_____	____	_____	_____
_____	____	_____	____	_____	_____
_____	____	_____	____	_____	_____

Course No	Title	Sem.hrs	Grade	Term/Trns
ELECTIVES (All college level courses appearing on your final transcript, **not listed above** that will bring your total semester hours to 120 hours. Includes upper division courses required to bring total upper division credit hours to 40.) (12 semester hours)				
*MATH 151	Calculus	2	_____	_____
_____ ____	_____	____	_____	_____
_____ ____	_____	____	_____	_____
_____ ____	_____	____	_____	_____
_____ ____	_____	____	_____	_____

Required Support Courses:

* GEOL 111 Principles of Physical Geology and GEOL 111L Principles of Physical Geology Laboratory
or GEOL 113 Field-Based Introduction to Physical Geology and GEOL 113L Field-Based Introduction to Physical Geology Lab
CHEM 131 General Chemistry and CHEM 131L General Chemistry Lab
CHEM 132 General Chemistry and CHEM 132L General Chemistry Lab
CHEM 300 Environmental Chemistry
ENGL 385 Technical/Professional Writing

Restricted Electives: 8 semester hours chosen from

ENVS 312/312L Soils & Sustainability and Laboratory
ENVS 315 Mined Land Rehabilitation
ENVS 321 Environmental Risk Analysis
ENVS 350/350L Ecology and Management of Shrublands and Grasslands and Laboratory
ENVS 360/360L Fire Ecology & Lab
ENVS 396 Topics
ENVS 413 Environmental Fate & Transport of Contaminants
ENVS 420/420L Advanced Environmental Sampling & Analytical Methods and Laboratory
ENVS 431 Water & Wastewater Treatment
ENVS 433 Restoration of Aquatic Systems
ENVS 455 Restoration Ecology
ENVS 496 Topics

SUGGESTED COURSE SEQUENCING FOR A MAJOR IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY – ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

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 the assigned advisor and check the 2 year course matrix on the Mesa State website for course availability.

FRESHMAN YEAR

Fall Semester		Hours
ENVS 104	Environmental Science: Global Sustainability	3
ENGL 111	English Composition	3
General Education Natural Science		3
General Education History		3
General Education Fine Arts		3
		15

Spring Semester		Hours
ENGL 112	English Composition	3
STAT 200	Probability and Statistics	3
GEOL 111/111L	Principles of Physical Geology with Lab	4
OR		
GEOL 113/113L	Field-Based Introduction to Physical Geology with Lab	4
General Education Humanities		3
KINE 100	Health and Wellness	1
KINA	Activity	1
		15

SOPHOMORE YEAR

Fall Semester		Hours
ENVS 204	Introduction to Ecosystem Management	3
ENVS 204L	Intro to Ecosystem Management Lab	1
CHEM 131	General Chemistry	4
CHEM 131L	General Chemistry Lab	1
General Education Social/Behavioral Science		3
General Education Applied Studies*		3
		15

Spring Semester		Hours
ENVS 221	Science & Technology of Pollution Control	3
ENVS 221L	Science & Technology of Poll. Control Lab	1
CHEM 132	General Chemistry	4
CHEM 132L	General Chemistry Lab	1
General Education Natural Science with Lab		4
Degree Distinction Social/Behavioral Science or Humanities		3
		16

*CSCI 120 Technical Software recommended

JUNIOR YEAR

Fall Semester		Hours
ENVS 331	Water Quality	3
ENVS 331L	Water Quality Lab	1
MATH 151	Calculus I	5
Electives (Unrestricted)		3
General Education Social/Behavioral Science		3
		15

Spring Semester		Hours
ENVS 340	Applied Atmospheric Science	3
CHEM 300	Environmental Chemistry	4
ENGL 385	Technical/Professional Writing	3
Electives (Unrestricted)		4
		14

Summer Semester		Hours
ENVS 499	Internship	4

SENIOR YEAR

Fall Semester		Hours
ENVS 301	Environmental Project Management	2
ENVS 313	Characterization of Contaminated Sites	3
ENV 313L	Char. Of Contaminated Sites Lab	1
Electives (Restricted)		4
Electives (Unrestricted)		3
		13

Spring Semester		Hours
ENVS 212	Environmental Health & Safety	2
ENVS 212L	Environmental Health & Safety Lab	1
ENVS 410	Environmental Regulatory Compliance	3
ENVS 492	Capstone in ENVS	2
Electives (Restricted)		4
KINA	Activity	1
		13