2005 – 06 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 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.

_____ _____20_____
Signature of Advisor Date

_____ _____20_____
Signature of Department Head Date

_____ _____20_____
Signature of Registrar Date

- Must earn 120 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 2.0 or higher must be maintained for all courses.
- A "C" or higher is required in all courses listed as major requirements.
- 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.
- 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.

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.

English: ENGL 111 **and** 112 (6 semester hours, must receive a "C" or higher, must be completed by the time the student has 60 semester hours)

Course	No.	Credit	Grade	Term	Year	Trns/Subs
*ENGL						
*ENGL						

*ENGL 129, Honors English, may be substituted for ENGL 111 and ENGL 112. Must earn a grade of "C" or better. May need to take additional electives.

Humanities: (6 semester hours)

Course	No.	Credit	Grade	Term	Year	Trns/Subs

Social and Behavioral Sciences: (6 semester hours)

Course	No.	Credit	Grade	Term	Year	Trns/Subs

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

Course	No.	Credit	Grade	Term	Year	Trns/Subs

Fine Arts: (3 semester hours)

Course	No.	Credit	Grade	Term	Year	Trns/Subs

Natural Sciences: (minimum 6 semester hours, at least one course must include a lab)

Course	No.	Credit	Grade	Term	Year	Trns/Subs

Applied Studies: (3 semester hours)

Course	No.	Credit	Grade	Term	Year	Trns/Subs

Other Requirements (11 semester hours)

Human Performance and Wellness: (3 Semester Hours)

Course	No.	Credit	Grade	Term	Year	Trns/Subs
HPWA	100	1				
HPWE		1				
HPWE		1				

See the M.S.C. catalog for the list of approved HPWE Activity courses.

Bachelor of Science Degree Distinction:
(8 semester hours) Must earn a "C" or better in both courses.

Course	No.	Credit	Grade	Term	Year	Trns/Subs
MATH	151	5				
STAT	200	3				

Environmental Science and Technology – Environmental Restoration and Waste Management Major Requirements (65-67 Semester Hours)
A "C" or higher is required in all courses listed as major requirements.

Course	No.	Credit	Grade	Term	Year	Trns/Subs
ENVS	110	3				
ENVS	200	1				
ENVS	200L	1				
ENVS	212	2				
ENVS	212L	1				
ENVS	221	3				
ENVS	301	2				
ENVS	313	3				
ENVS	313L	1				

Course	No.	Credit	Grade	Term	Year	Trns/Subs
ENVS	331	3				
ENVS	331L	1				
ENVS	340	3				
ENVS	410	3				
ENVS	420	3				
ENVS	420L	1				
ENVS	492	2				
ENVS	499	4				

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Course	No.	Credit	Grade	Term	Year	Trns/Subs	Course	No.	Credit	Grade	Term	Year	Trns/Subs
*BIOL 105/105L (4,1) or GEOL 111/11lL (3,1)							CHEM	132	4				
*							CHEM	132L	1				
*							**CHEM 300 (4) or CHEM 311/311L (4,1)						
CHEM	131	4					**						
CHEM	131L	1					**						
							ENGL	385	3				

Restricted Electives: 7 semester hours chosen from ENVS 312/312L, ENVS 315, ENVS 321, ENVS 350/350L, ENVS 396, ENVS 455, ENVS 413, ENVS 431, ENVS 433, ENVS 496

Electives (All college level courses appearing on your final transcript, **not listed above** that will bring your total semester hours to 120 hours. Excludes HPWE activity courses.) (11 semester hours; additional upper division hours may be needed.)

Course	No.	Credit	Grade	Term	Year	Trns/Subs	Course	No.	Credit	Grade	Term	Year	Trns/Subs

GRADUATION INFORMATION

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

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 "C" or above.)
ENGL 111 **and** ENGL 112 **or** ENGL 129 ***(by permission)***

Humanities – 6 semester hours

Social and Behavioral Sciences – 6 semester hours

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.)

Applied Studies – 3 semester hours

OTHER REQUIREMENTS (11 Semester Hours)

Human Performance and Wellness – 3 Semester Hours
Each student must take HPWA 100 together with two HPWE Activity courses. See current catalog for listing.

Degree Distinction – 8 Semester Hours
MATH 151 Calculus I (5 semester hours)
STAT 200 Probability and Statistics (3 semester hours)

Environmental Science and Technology – Environmental Restoration and Waste Management
(65-67 Semester Hours) A "C" or higher is required in all courses listed as major requirements.

Required Courses:

ENVS 110 Environmental Science and Technology I
ENVS 200 Field Methods in Environmental Science
ENVS 200L Field Methods in Environmental Science Laboratory
ENVS 212 Environmental Health and Safety
ENVS 212L Environmental Health and Safety Laboratory
ENVS 221 Science & Technology of Pollution Control
ENVS 301 Environmental Project Management
ENVS 313 Characterization of Contaminated Sites
ENVS 313L Characterization of Contaminated Sites Laboratory
ENVS 331 Water Quality
ENVS 331L Water Quality Laboratory
ENVS 340 Air Quality & Pollution Control
ENVS 410 Environmental Regulatory Compliance
ENVS 420 Advanced Environmental Sampling & Analytical Methods
ENVS 420L Advanced Environmental Sampling & Analytical Methods Laboratory
ENVS 492 Capstone in Environmental Science & Technology
ENVS 499 Internship
BIOL 105 Attributes of Living Systems and BIOL 105L Attributes of Livings Systems Laboratory
or GEOL 111 Principles of Physical Geology and GEOL 111L Principles of Physical Geology Laboratory
CHEM 131 General Chemistry
CHEM 131L General Chemistry Laboratory
CHEM 132 General Chemistry
CHEM 132L General Chemistry Laboratory
CHEM 300 Environmental Chemistry
or CHEM 311 Organic Chemistry and CHEM 311 Organic Chemistry Laboratory
ENGL 385 Technical/Professional Writing

7 semester hours chosen from:

ENVS 312/312L Soil Properties & Characterization 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 455 Restoration Ecology
ENVS 396 Topics
ENVS 413 Environmental Fate & Transport of Contaminants
ENVS 431 Water & Wastewater Treatment
ENVS 433 Restoration of Aquatic Systems
ENVS 496 Topics

General Electives: 11 Semester Hours; additional upper division hours may be needed.

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 and approved by the Department Head.

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

FRESHMAN YEAR

Fall Semester		Hours
ENVS 110	Environmental Science & Technology I	3
ENGL 111	English Composition	3
General Education Natural Science with Lab		3-4
General Education Humanities		3
General Education Fine Arts		3
		15-16

Spring Semester		Hours
ENGL 112	English Composition	3
STAT 200	Probability and Statistics	3
BIOL 105	Attributes of Living Systems	4
BIOL 105L	Attributes of Living Systems Lab	1
General Education Humanities		3
		14

SOPHOMORE YEAR

Fall Semester		Hours
ENVS 200	Field Methods in Environmental Science	1
ENVS 200L	Field Methods in Env. Science Lab	1
CHEM 131	General Chemistry	4
CHEM 131L	General Chemistry Lab	1
HPWA 100	Health and Wellness	1
General Education Social/Behavioral Science		3
General Education Applied Studies*		3
		14

*CSCI 120 Technical Software recommended

Spring Semester		Hours
ENVS 221	Science & Technology of Poll. Control	3
CHEM 132	General Chemistry	4
CHEM 132L	General Chemistry Lab	1
General Education Natural Science		3
General Education Social/Behavioral Science		3
HPWE Activity		1
		15

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 or Humanities		3
		15

Spring Semester		Hours
ENVS 340	Air Quality and Pollution Control	3
ENVS 420	Adv. Env. Sampling & Anal. Methods	3
ENVS 420L	Adv. Env. Samp. & Anal. Meth. Lab	1
CHEM 300	Environmental Chemistry	4
ENGL 385	Technical/Professional Writing	3
		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)		4-6
		14-16

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)		3
Electives (Unrestricted)		2
HPWE Activity		1
		14