2005 – 06 PETITION/PROGRAM SHEET
Degree: Bachelor of Science
Major: Physical Sciences
Concentration: Environmental Geology
www.mesastate.edu/schools/snsm/geology/

About This Major . . .

The Bachelor of Science Degree with a concentration in Environmental Geology, is designed for students who (1) desire a strong liberal arts education with emphasis on environmental issues within the earth sciences, (2) wish to pursue a graduate degree in environmental geology, or (3) desire a professional or technical career. The Environmental Geology B.S. degree has the same basic framework as the B.S. degree in with a concentration in Geology. The specific focus of the Environmental Geology Program is different from the Geology Program, in that a stronger emphasis is placed on geologic hazards, ground-water and surface-water hydrology, low-temperature geochemistry, biological systems, and environmental science. Recent graduates are attending graduate programs at major universities or have entered the work force as geological technicians or professional geologists. Instruction takes place in a state-of-the-art science complex, which houses several instructional laboratories, a projects room, computer-applications laboratory, class preparation room, petrology-mineralogy laboratory, rock-storage facilities, and a sample preparation room. Most classes have a strong field component so that students can enjoy the diverse geological setting of the Grand Junction area. The program is supported by five tenure-track faculty members, plus four instructors. Equipment available includes research petrographic microscopes, binocular microscopes, a computer-assisted x-ray diffractometer, several scanning-electron microscopes (available through the Biology Department), GPS units, short-period and long-period seismometers and a magnetometer. Computer facilities include modern PC systems with software basics for communications, database management, word-processing, and also include software for geographical information systems (GIS) and geostatistics.

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 major courses.
- 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.

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

Social and Behavioral Sciences: (6 semester hours)

Course	No.	Credit	Grade	Term	Year	Trns/Subs
Humanities or Social/Behavioral Science: (3 semester hours)						
Fine Arts: (3 semester hours)						
Natural Sciences: (minimum 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)

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				

Physical Sciences – Environmental Geology Major Requirements (59 Semester Hours)
A "C" or higher is required in all major courses.

Course	No.	Credit	Grade	Term	Year	Trns/Subs
GEOL 111/111L or GEOL 113/113L *						
GEOL*		3				
GEOL*	L	1				
GEOL	112	3				
GEOL	112L	1				
GEOL	250	3				
GEOL	331	3				
GEOL	331L	1				
GEOL	340	3				
GEOL	340L	1				
GEOL	380	6				

Course	No.	Credit	Grade	Term	Year	Trns/Subs
GEOL	402	3				
GEOL	402L	1				
GEOL	404	3				
GEOL	404L	1				
GEOL	415	3				
GEOL	415L	1				
GEOL	444	3				
GEOL	444L	1				

* Either GEOL 111/111L or GEOL 113/113L may be taken for credit, but not both.

Continued on page 3

Required support courses

BIOL 105/105L or ENVS 213/213L:

		4				
		1				

CHEM 122/122L or CHEM 131/131L or CHEM 311/311L:

		4				
		1				

ENVS	110	3				
PHYS	111	4				
PHYS	111L	1				

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.) (17 semester hours; at least 10 hours must be upper division.)

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)

Physical Science – Environmental Geology (59 Semester Hours)
A "C" or higher is required in all major courses

Required 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 Laboratory
(Either GEOL 111/111L or GEOL 113/113L may be taken for semester, but not both.)
GEOL 112 Principles of Historical Geology
GEOL 112L Principles of Historical Geology Laboratory
GEOL 250 Environmental Geology
GEOL 331 Crystallography and Mineralogy
GEOL 331L Crystallography and Mineralogy Laboratory
GEOL 340 Igneous & Metamorphic Petrology
GEOL 340L Igneous & Metamorphic Petrology Laboratory
GEOL 380 Field Studies
GEOL 402 Applications of Geomorphology
GEOL 402L Applications of Geomorphology Laboratory
GEOL 404 Geophysics
GEOL 404L Geophysics Laboratory
GEOL 415 Introduction to Ground Water
GEOL 415L Introduction to Ground Water Laboratory
GEOL 444 Stratigraphy and Sedimentation
GEOL 444L Stratigraphy and Sedimentation Laboratory
BIOL 105 Attributes of Living Systems and
BIOL 105L Attributes of Living Systems Laboratory **or**
ENVS 231 Site Characterization and
ENVS 231L Site Characterization Lab
CHEM 122 Principles of Organic Chemistry and
CHEM 122L Principles of Organic Chemistry Lab **or**
CHEM 131L General Chemistry and
CHEM 131L General Chemistry Laboratory **or**
CHEM 311 Organic Chemistry and
CHEM 311L Organic Chemistry Laboratory
ENVS 110 Environmental Science & Technology I
PHYS 111 General Physics
PHYS 111L General Physics Laboratory

General Electives: 17 Semester Hours; 10 hours must be upper division.

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 PHYSICAL SCIENCE – ENVIRONMENTAL GEOLOGY

FRESHMAN YEAR

Fall Semester		Hours
GEOL 111*	Principles of Physical Geology and	3
GEOL 111L*	Principles of Physical Geology Lab **or**	1
GEOL 113*	Fld. Based Intro to Phys Geology **and**	3
GEOL 113L*	Fld. Based Intro to Phys Geology Lab	1
ENGL 111	English Composition	3
MATH 151	Calculus I	5
General Education Humanities		3
		15

Spring Semester		Hours
GEOL 112	Principles of Historical Geology	3
GEOL 112L	Principles of Historical Geology Lab	1
ENGL 112	English Composition	3
General Education Humanities		3
General Education Social/Behavioral Science		3
HPWA Activity (2)		2
		15

SOPHOMORE YEAR

Fall Semester		Hours
CHEM ____	Select from 122, 131, or 311 and the	4
CHEM ____L	Corresponding Lab	1
ENVS 110	Environmental Science & Technology I	3
PHYS 111	General Physics	4
PHYS 111L	General Physics Lab	1
General Education Natural Science		3
HPWA 100	Health and Wellness	1
		17

Spring Semester		Hours
GEOL 250	Environmental Geology	3
STAT 200	Probability and Statistics	3
General Education Social/Behavioral Science or Humanities		3
General Education Applied Studies		3
General Education Social/Behavioral Science		3
		15

JUNIOR YEAR

Fall Semester		Hours
GEOL 331	Crystallography & Mineralogy	3
GEOL 331L	Crystallography & Mineralogy Lab	1
BIOL 105	Attributes of Living Systems and	
BIOL 105L	Attributes of Living Systems Lab **or**	
ENVS 213	Site Characterization and	4
ENVS 213L	Site Characterization Lab	1
General Education Natural Science with Lab		4
General Education Fine Arts		3
		15

Spring Semester		Hours
GEOL 340	Igneous & Metamorphic Petrology	3
GEOL 340	Igneous & Metamorphic Petrology Lab	1
Electives		10
		14

Summer Semester		Hours
GEOL 380	Field Studies	6

SENIOR YEAR

Fall Semester		Hours
GEOL 402	Applications of Geomorphology	3
GEOL 402L	Applications of Geomorphology	1
GEOL 404	Geophysics	3
GEOL 404L	Geophysics Lab	1
GEOL 444	Stratigraphy & Sedimentation	3
GEOL 444L	Stratigraphy & Sedimentation Lab	1
		12

Spring Semester		Hours
GEOL 415	Introduction to Ground Water	3
GEOL 415L	Introduction to Ground Water Lab	1
Electives		6
		10

* Either GEOL 111/111L or GEOL 113/113L may be taken for credit, but not both.