2007 – 08 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 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 major courses.
- Excess KINA courses beyond the two required and 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

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)

_____ ____ _____ ____ _____ _____

PHYSICAL SCIENCES – ENVIRONMENTAL GEOLOGY MAJOR REQUIREMENTS (63-64 semester hours)

Core Classes

GEOL 111/111L or GEOL 113/113L *

*GEOL	____ _____	3	_____	_____
*GEOL	___L _____	1	_____	_____

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

GEOL 112	Principles of Historical Geology	3	_____	_____
GEOL 112L	Principles of Historical Geology Lab	1	_____	_____
GEOL 202	Introduction to Field Studies	3	_____	_____
GEOL 204	Computer Applications in Geology	3	_____	_____
GEOL 250	Environmental Geology	3	_____	_____
GEOL 301	Structural Geology	3	_____	_____
GEOL 301L	Structural Geology Lab	1	_____	_____
GEOL 331	Crystallography & Mineralogy	3	_____	_____
GEOL 331L	Crystallography & Mineralogy Lab	1	_____	_____
GEOL 355	Basic Hydrology	3	_____	_____
GEOL 402	Applications of Geomorphology	3	_____	_____
GEOL 402L	Applications of Geomorphology Lab	1	_____	_____
GEOL 415	Intro to Ground Water	3	_____	_____
GEOL 415L	Intro to Ground Water Lab	1	_____	_____
GEOL 444	Stratigraphy and Sedimentation	3	_____	_____
GEOL 444L	Stratigraphy and Sedimentation Lab	1	_____	_____
GEOL 480	Summer Field Camp	6	_____	_____
GEOL 490	Seminar	3	_____	_____

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

Required Support Courses

BIOL102/102L or BIOL 211/211L

BIOL	____ _____	____	_____	_____
BIOL	____ _____	____	_____	_____
CHEM 131	General Chemistry	4	_____	_____
CHEM 131L	General Chemistry Lab	1	_____	_____

Course No	Title	Sem.hrs	Grade	Term

PHYS 111/111L **or** PHYS 131/131L

PHYS	____ _____	4	_____	_____
PHYS	___L _____	1	_____	_____

Course No Title Sem.hrs Grade Term/Trns

Restricted Electives (7 semester hours; 8 hours of Restricted and General Electives must be upper division.)
Choose from GEOL 325, GEOL 359, GEOL 361, GEOL 404, GEOL 404L, GEOL 455, GEOL 497, ENVS 312, ENVS 312L, ENVS 313, ENVS 313L, POLS 488, CHEM 132, CHEM 132L, MATH 152, STAT 311, *PHYS 112/112L or *PHYS 132/132L

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

*Either PHYS 112/112L or PHYS 132/132L may be taken for credit, but not both.

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. Excludes KINA activity courses.) (6-7 semester hours; 8 hours of Restricted and General Electives must be upper division.)

*MATH 151 Calculus I 2 _____ _____

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

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.)

BIOL 102 General Organisms Biology **and**
BIOL 102 General Organisms Biology **and**
BIOL 211 Ecosystem Biology **and**
BIOL 211L Ecosystem Biology Laboratory
PHYS 111 General Physics **and**
PHYS 111L General Physics Laboratory **OR**
PHYS 131 Fundamental Mechanics **and**
PHYS 131L Fundamental Mechanics Laboratory

SUGGESTED COURSE SEQUENCING FOR A MAJOR IN PHYSICAL SCIENCE – ENVIRONMENTAL GEOLOGY

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
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	History	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
KINE	Activity (2 courses)	2
		15

SOPHOMORE YEAR

Fall Semester		Hours
GEOL 202	Introduction to Field Studies	3
GEOL 250	Environmental Geology	3
CHEM 131	General Chemistry	4
CHEM 131L	General Chemistry Lab	1
PHYS 111	General Physics **and**	4
PHYS 111L	General Physics Lab **OR**	1
PHYS 131	Fundamental Mechanics **and**	4
PHYS 131L	Fundamental Mechanics Lab	1
KINE 100	Health and Wellness	1
		17

Spring Semester		Hours
GEOL 204	Computer Applications in Geology	3
BIOL 102	General Organismal Biology	3
BIOL 102L	General Organismal Biology Lab	1
STAT 200	Probability and Statistics	3
General Education	Social/Behavioral Science or Humanities	3
General Education	Natural Science	3
		16

JUNIOR YEAR

Fall Semester		Hours
GEOL 301	Structural Geology	3
GEOL 301L	Structural Geology	1
GEOL 331	Crystallography & Mineralogy	3
GEOL 331L	Crystallography & Mineralogy Lab	1
GEOL 355	Basic Hydrology	3
General Education	Natural Science with Lab	3-4
		14-15

Spring Semester		Hours
General Education	Fine Arts	3
General Education	Applied Studies	3
General Education	Social/Behavioral Science	3
Restricted Electives		4
		13

SENIOR YEAR

Fall Semester		Hours
GEOL 402	Applications of Geomorphology	3
GEOL 402L	Applications of Geomorphology	1
Restricted Electives		3
Electives		5-6
		12-13

Spring Semester		Hours
GEOL 415	Introduction to Ground Water	3
GEOL 415L	Introduction to Ground Water Lab	1
GEOL 444	Stratigraphy and Sedimentation	3
GEOL 444L	Stratigraphy and Sedimentation	1
GEOL 490	Seminar	3
		11

Summer Semester		Hours
GEOL 480	Field Studies	6

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