



2006 – 07 PETITION/PROGRAM SHEET
Degree: Bachelor of Science
Major: Physical Sciences
Concentration: Geology
www.mesastate.edu/schools/snsm/geology/

About This Major . . .

The Bachelor of Science degree with a concentration in geology is designed for students who: (1) desire a strong liberal arts education with emphasis on the earth sciences, (2) wish to pursue a graduate degree in geology, or (3) desire a professional or technical geo-science career. The degree program in geology is robust. 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 includes 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.

 Signature of Advisor _____ Date _____ 20____

 Signature of Department Head _____ Date _____ 20____

 Signature of Registrar _____ Date _____ 20____

- 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 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.
- 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)

Kinesiology: (3 Semester Hours)

Course No. Credit Grade Term Year Trns/Subs

KINE/HPWA 100 1 _____ _____ _____ _____

KINA/HPWE _____ 1 _____ _____ _____ _____

KINA/HPWE _____ 1 _____ _____ _____ _____

See the M.S.C. catalog for the list of approved KINA/HPWE/Selected DANC 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 – Geology Major Requirements (61 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 _____ _____ _____ _____

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

GEOL 112 3 _____ _____ _____ _____

GEOL 112L 1 _____ _____ _____ _____

GEOL 202 3 _____ _____ _____ _____

GEOL 204 3 _____ _____ _____ _____

GEOL 301 3 _____ _____ _____ _____

GEOL 301L 1 _____ _____ _____ _____

GEOL 331 3 _____ _____ _____ _____

GEOL 331L 1 _____ _____ _____ _____

GEOL 340 3 _____ _____ _____ _____

GEOL 340L 1 _____ _____ _____ _____

Course No. Credit Grade Term Year Trns/Subs

GEOL 402 3 _____ _____ _____ _____

GEOL 402L 1 _____ _____ _____ _____

GEOL 404 3 _____ _____ _____ _____

GEOL 404L 1 _____ _____ _____ _____

GEOL 444 3 _____ _____ _____ _____

GEOL 444L 1 _____ _____ _____ _____

GEOL 480 6 _____ _____ _____ _____

GEOL 490 3 _____ _____ _____ _____

BIOL 102 3 _____ _____ _____ _____

BIOL 102L 1 _____ _____ _____ _____

CHEM 131 4 _____ _____ _____ _____

CHEM 131L 1 _____ _____ _____ _____

PHYS 111/111L or PHYS 131/131L

PHYS _____ 4 _____ _____ _____ _____

PHYS _____ L 1 _____ _____ _____ _____

Restricted Electives (8 semester hours; 7 upper division hours may be needed)

Choose from GEOL 325, GEOL 355, GEOL 359, GEOL 361, GEOL 411, GEOL 411L, GEOL 415, GEOL 415L, GEOL 455, GEOL 497, ENVS 312, ENVS 312L, CHEM 132, CHEM 132L, MATH 152, STAT 311, *PHYS 112/112L or *PHYS 132/132L

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

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

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/HPWE activity courses.) (6-7 semester hours; 6 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)

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 – 8 Semester Hours

MATH 151 Calculus I (5 semester hours)

STAT 200 Probability and Statistics (3 semester hours)

Physical Science - Geology (61 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 Lab **OR**

GEOL 113 Field-Based Introduction to Physical Geology and

GEOL 113L Field-Based Introduction to Physical Geology Lab

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

GEOL 112 Principles of Historical Geology

GEOL 112L Principles of Historical Geology Laboratory

GEOL 202 Introduction to Field Studies

GEOL 204 Computer Applications in Geology

GEOL 301 Structural Geology

GEOL 301L Structural Geology Laboratory

GEOL 331 Crystallography and Mineralogy

GEOL 331L Crystallography and Mineralogy Laboratory

GEOL 340 Igneous & Metamorphic Petrology

GEOL 340L Igneous & Metamorphic Petrology Laboratory

GEOL 402 Applications of Geomorphology

GEOL 402L Applications of Geomorphology Laboratory

GEOL 404 Geophysics

GEOL 404L Geophysics Laboratory

GEOL 444 Stratigraphy and Sedimentation

GEOL 444L Stratigraphy and Sedimentation Laboratory

GEOL 480 Summer Field Camp

GEOL 490 Seminar

BIOL 102 General Organismal Biology

BIOL 102L General Organismal Biology Laboratory

CHEM 131 General Chemistry

CHEM 131L General Chemistry Laboratory

*PHYS 111 General Physics and PHYS 111L General Physics Laboratory **OR**

*PHYS 131 Fundamental Mechanics and PHYS 131L Fundamental Mechanics Laboratory

*Either PHYS 111/111L or PHYS 131/131L may be taken for credit, but not both.

Restricted Electives: 8 Semester Hours; 7 upper division hours may be needed.

General Electives: 6-7 Semester Hours; 7 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 PHYSICAL SCIENCE – 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	Spring Semester	Hours
GEOL 111* Principles of Physical Geology and	3	GEOL 112 Principles of Historical Geology	3
GEOL 111L* Principles of Physical Geology Lab OR	1	GEOL 112L Principles of Historical Geology Lab	1
GEOL 113* Fld. Based Intro to Phys Geology and	3	ENGL 112 English Composition	3
GEOL 113L* Fld. Based Intro to Phys Geology Lab	1	General Education Humanities	3
ENGL 111 English Composition	3	General Education Social/Behavioral Science	3
MATH 151 Calculus I	5	KINE/HPWA Activity (2 courses)	<u>2</u>
General Education Humanities	<u>3</u>		15
	15		

SOPHOMORE YEAR

Fall Semester	Hours	Spring Semester	Hours
GEOL 202 Intro to Field Studies	3	GEOL 204 Computer Applications in Geology	3
CHEM 131 General Chemistry	4	BIOL 102 Gen. Organisms Biology	3
CHEM 131L General Chemistry Lab	1	BIOL 102L Gen. Organisms Biology Lab	1
PHYS 111** General Physics and	4	STAT 200 Probability and Statistics	3
PHYS 111L** General Physics Lab OR	1	General Education Natural Science	3
PHYS 131** Fundamental Mechanics and	4	General Education Fine Arts	<u>3</u>
PHYS 131L** Fundamental Mechanics Lab	1		16
General Education Social/Behavioral Science	3		
KINE/HPWA 100 Health and Wellness	<u>1</u>		
	17		

JUNIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
GEOL 301 Structural Geology	3	GEOL 340 Igneous & Metamorphic Petrology	3
GEOL 301L Structural Geology Lab	1	GEOL 340L Igneous & Metamorphic Petrology Lab	1
GEOL 331 Crystallography & Mineralogy	3	General Education Social/Behavioral Science or Humanities	3
GEOL 331L Crystallography & Mineralogy Lab	1	Electives	<u>6-7</u>
General Education Natural Science with Lab	3-4		13-14
General Education Applied Studies	<u>3</u>		
	14-15		

SENIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
GEOL 402 Applications of Geomorphology	3	GEOL 404 Geophysics	3
GEOL 402L Applications of Geomorphology	1	GEOL 404L Geophysics Lab	1
Restricted Electives	<u>8</u>	GEOL 444 Stratigraphy & Sedimentation	3
	12	GEOL 444L Stratigraphy & Sedimentation Lab	1
		GEOL 490 Seminar	<u>3</u>
			11
		Summer Semester	Hours
		GEOL 480 Summer Field Camp	6

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

**Either PHYS 111/111L or PHYS 131/131L may be taken for credit, but not both.