



2005 – 06 PETITION/PROGRAM SHEET

Degree: Bachelor of Science

Major: Physical Sciences

Concentration: Geology

www.mesastate.edu/schools/snsn/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 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.

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 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.

<u>Course</u>	<u>No.</u>	<u>Credit</u>	<u>Grade</u>	<u>Term</u>	<u>Year</u>	<u>Trns/Subs</u>	<u>Course</u>	<u>No.</u>	<u>Credit</u>	<u>Grade</u>	<u>Term</u>	<u>Year</u>	<u>Trns/Subs</u>
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)							Humanities or Social/Behavioral Science: (3 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.							Fine Arts: (3 semester hours)						

Humanities: (6 semester hours)							Natural Sciences: (minimum 6 semester hours, at least one course must include a lab)						
_____							_____						
_____							_____						
Social and Behavioral Sciences: (6 semester hours)							Applied Studies: (3 semester hours)						
_____							_____						
_____							_____						

Other Requirements (11 semester hours)

Human Performance and Wellness: (3 Semester Hours)							Bachelor of Science Degree Distinction:						
							(8 semester hours) Must earn a "C" or better in both courses.						
<u>Course</u>	<u>No.</u>	<u>Credit</u>	<u>Grade</u>	<u>Term</u>	<u>Year</u>	<u>Trns/Subs</u>	<u>Course</u>	<u>No.</u>	<u>Credit</u>	<u>Grade</u>	<u>Term</u>	<u>Year</u>	<u>Trns/Subs</u>
HPWA	100	1	_____	_____	_____	_____	MATH	151	5	_____	_____	_____	_____
HPWE	_____	1	_____	_____	_____	_____	STAT	200	3	_____	_____	_____	_____
HPWE	_____	1	_____	_____	_____	_____							
See the M.S.C. catalog for the list of approved HPWE Activity courses.													

Physical Sciences – Geology Major Requirements (58 Semester Hours)

A "C" or higher is required in all major courses.

<u>Course</u>	<u>No.</u>	<u>Credit</u>	<u>Grade</u>	<u>Term</u>	<u>Year</u>	<u>Trns/Subs</u>	<u>Course</u>	<u>No.</u>	<u>Credit</u>	<u>Grade</u>	<u>Term</u>	<u>Year</u>	<u>Trns/Subs</u>
GEOL 111/111L or GEOL 113/113L *							GEOL 380 6 _____						
*GEOL	_____	3	_____	_____	_____	_____	GEOL	390	3	_____	_____	_____	_____
*GEOL	L	1	_____	_____	_____	_____	GEOL	402	3	_____	_____	_____	_____
* Either GEOL 111/111L or GEOL 113/113L may be taken for credit, but not both.							GEOL 402L 1 _____						
GEOL	112	3	_____	_____	_____	_____	GEOL	444	3	_____	_____	_____	_____
GEOL	112L	1	_____	_____	_____	_____	GEOL	444L	1	_____	_____	_____	_____
GEOL	250	3	_____	_____	_____	_____	GEOL	490	3	_____	_____	_____	_____
GEOL	301	3	_____	_____	_____	_____	BIOL	105	4	_____	_____	_____	_____
GEOL	301L	1	_____	_____	_____	_____	BIOL	105L	1	_____	_____	_____	_____
GEOL	331	3	_____	_____	_____	_____	CHEM	131	4	_____	_____	_____	_____
GEOL	331L	1	_____	_____	_____	_____	CHEM	131L	1	_____	_____	_____	_____
GEOL	340	3	_____	_____	_____	_____	PHYS	111	4	_____	_____	_____	_____
GEOL	340L	1	_____	_____	_____	_____	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.) (18 semester hours; 8 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)

Physical Science - Geology (58 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 credit, but not both.)
GEOL 112 Principles of Historical Geology
GEOL 112L Principles of Historical Geology Laboratory
GEOL 250 Environmental 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 380 Field Studies
GEOL 390 Computer Applications in Geology
GEOL 402 Applications of Geomorphology
GEOL 402L Applications of Geomorphology Laboratory
GEOL 444 Stratigraphy and Sedimentation
GEOL 444L Stratigraphy and Sedimentation Laboratory
GEOL 490 Seminar
BIOL 105 Attributes of Living Systems
BIOL 105L Attributes of Living Systems Laboratory
CHEM 131 General Chemistry
CHEM 131L General Chemistry Laboratory
PHYS 111 General Physics
PHYS 111L General Physics Laboratory

General Electives: 18 Semester Hours; 8 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 - GEOLOGY

FRESHMAN YEAR

Fall Semester	Hours	Spring Semester	Hours
GEOL 111* Principles of Physical Geology <u>and</u>	3	GEOL 112 Principles of Historical Geology	3
GEOL 111L* Principles of Physical Geology Lab <u>or</u>	1	GEOL 112L Principles of Historical Geology Lab	1
GEOL 113* Fld. Based Intro to Phys Geology <u>and</u>	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	HPWA Activity (2)	<u>2</u>
General Education Humanities	<u>3</u>		15
	15		

SOPHOMORE YEAR

Fall Semester	Hours	Spring Semester	Hours
CHEM 131 General Chemistry	4	GEOL 250 Environmental Geology	3
CHEM 131L General Chemistry Lab	1	BIOL 105 Attributes of Living Systems	4
PHYS 111 General Physics	4	BIOL 105L Attributes of Living Systems Lab	1
PHYS 111L General Physics Lab	1	General Education Natural Science	3
STAT 200 Probability and Statistics	3	General Education Fine Arts	3
General Education Social/Behavioral Science	3	General Education Social/Behavioral Science or Humanities	<u>3</u>
HPWA 100 Health and Wellness	<u>1</u>		17
	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 340 Igneous & Metamorphic Petrology Lab	1
GEOL 331 Crystallography & Mineralogy	3	GEOL 390 Computer Applications in Geology	3
GEOL 331L Crystallography & Mineralogy Lab	1	Electives	<u>6</u>
General Education Natural Science with Lab	4		13
General Education Applied Studies	<u>3</u>		
	15		
		Summer Semester	Hours
		GEOL 380 Field Studies	6

SENIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
GEOL 402 Applications of Geomorphology	3	GEOL 444 Stratigraphy & Sedimentation	3
GEOL 402L Applications of Geomorphology	1	GEOL 444L Stratigraphy & Sedimentation Lab	1
Electives	<u>7</u>	GEOL 490 Seminar	3
	11	Electives	<u>4</u>
			11

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