2009 – 2010 PETITION/PROGRAM SHEET
Degree: Bachelor of Science
Major: Physical Sciences
Concentration: Geology
www.mesastate.edu/academics/programs.html

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.

_____ _____ 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.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the MSC graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- 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		
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)					
BIOL 102/102L **or** BIOL 105/105L **or** PHYS 112/112L **or** PHYS 132/132L **or** CHEM 132/132L					
	L				
History (3 semester hours)					
HIST					
Fine Arts (3 semester hours)					

Course	No	Title	Sem.hrs	Grade	Term/Trns
OTHER LOWER DIVISION REQUIREMENTS (6 semester hours)					
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 – GEOLOGY MAJOR REQUIREMENTS (66 semester hours) A "C" or higher is required in all major courses.					
Geology Core Courses (39 semester hours)					
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	301	Structural Geology	3		
GEOL	301L	Structural Geology Lab	1		
GEOL	331	Crystallography & Mineralogy	3		
GEOL	331L	Crystallography & Mineralogy Lab	1		
GEOL	402	Applications of Geomorphology	3		
GEOL	402L	Applications of Geomorphology 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		
Required Geology Courses (8 semester hours)					
GEOL	340	Igneous & Metamorphic Petrology	3		
GEOL	340L	Igneous & Metamorphic Petrology Lab	1		
GEOL	404	Geophysics	3		
GEOL	404L	Geophysics Lab	1		
Required Support Courses (10 semester hours)					
CHEM	131	General Chemistry	4		
CHEM	131L	General Chemistry Lab	1		
PHYS	111/111L **or** PHYS 131/131L				
PHYS			4		
PHYS			1		

Course No Title Sem.hrs Grade Term/Trns

Restricted Electives (9 semester hours) chosen from list below.
NOTE: Seven hours of Restricted and General Electives must be upper division.

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

*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. 11 semester hours.)
NOTE: Seven hours of Restricted and General Electives must be upper division.

*MATH 151 Calculus I 2 _____ _____
_____ ____ _____ ____ _____ _____
_____ ____ _____ ____ _____ _____
_____ ____ _____ ____ _____ _____
_____ ____ _____ ____ _____ _____
_____ ____ _____ ____ _____ _____

RESTRICTED ELECTIVES:

GEOL 250 Environmental Geology (3)
GEOL 325 Intro to Engineering Geology (3)
GEOL 355 Basic Hydrology (3)
GEOL 359 Surv of Energy-Related Nat Resources (3)
GEOL 361 Surv of Mineral-Related Nat Resources (3)
GEOL 394 Natural Resources of the West (1)
GEOL 411 Paleontology (3)
Geol 411L Paleontology Lab (1)
GEOL 415 Introduction to Ground Water (3)
GEOL 415L Intro to Ground Water Lab (1)
GEOL 455 River Dynamics (3)
GEOL 455L River Dynamics Lab (1)
GEOL 497 Structured Research (1-3)
ENVS 312 Soil Science and Sustainability (3)
ENVS 312L Soil Science and Sust Lab (1)
CHEM 132 General Chemistry (4)
CHEM 132L General Chemistry Lab (1)
MATH 152 Calculus II (5)
STAT 311 Statistical Methods (3)
PHYS 112 General Physics (4)
and PHYS 112L General Physics Lab (1)
or PHYS 132 Electromag and Optics (4)
and PHYS 132L Electromag and Optics Lab(1)

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 the assigned 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	Health and Wellness	1
		14

SOPHOMORE YEAR

Fall Semester		Hours
GEOL 202	Intro to Field Studies	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
General Education	Social/Behavioral Science	3
		16

Spring Semester		Hours
GEOL 204	Computer Applications in Geology	3
STAT 200	Probability and Statistics	3
General Education	Natural Science	3
General Education	Natural Science with Lab	4
General Education	Fine Arts	3
		16

JUNIOR YEAR

Fall Semester		Hours
GEOL 301	Structural Geology	3
GEOL 301L	Structural Geology Lab	1
GEOL 331	Crystallography & Mineralogy	3
GEOL 331L	Crystallography & Mineralogy Lab	1
General Education	Natural Science with Lab	4
General Education	Applied Studies	3
		15

Spring Semester		Hours
GEOL 340	Igneous & Metamorphic Petrology	3
GEOL 340L	Igneous & Metamorphic Petrology Lab	1
Degree Distinction	Social/Behavioral Science or Humanities	3
KINA	Activity	1
Electives		6
		14

SENIOR YEAR

Fall Semester		Hours
GEOL 402	Applications of Geomorphology	3
GEOL 402L	Applications of Geomorphology	1
Restricted Electives		8
		12

Spring Semester		Hours
GEOL 404	Geophysics	3
GEOL 404L	Geophysics Lab	1
GEOL 444	Stratigraphy & Sedimentation	3
GEOL 444L	Stratigraphy & Sedimentation Lab	1
GEOL 490	Seminar	3
KINA	Activity	1
		12

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.