2010-2011 PETITION/PROGRAM SHEET
Degree: Bachelor of Science
Major: Physical Sciences
Concentration: Geology
Option: Secondary Teaching
www.mesastate.edu/academics/programs.html

About This Major . . .

The Earth Science secondary licensure degree is structured for graduates to pursue teaching careers at the middle or high school level. The basic curriculum includes all of the major topics within a traditional geology program while also incorporating teacher education courses required for licensure by the state of Colorado. The degree plan includes basic chemistry, physics, and biology. Instruction takes placed in a state of the art science complex on campus which houses several instructional laboratories, projects rooms, a computer applications lab, petrology-mineralogy lab, and rock storage facilities. Most classes include a strong field component allowing students to take advantage of the diverse geological setting of the Grand Junction area. Students have access to department equipment that includes research petrographic microscopes, binocular microscopes, a computer-assisted x-ray diffractometer, scanning electron microscopes, GPS units, short- and long-period seismometers, and a magnetometer.

The secondary licensure program provides teacher education candidates with broad content knowledge in science and prepares them as teachers for grades 7 through 12. A minimum of 75 credit hours of general education and content area coursework must be completed with a minimum GPA of 2.80 before a candidate may apply for admission to the Center for Teacher Education secondary licensure program. Please see the Teacher Education Admission Packet for further information on admissions criteria. EDUC 211, *Foundations of Education*, must be taken before applying to the program.

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 an 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 Content 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:

- 126 semester hours total (A minimum of 28 taken at MSC in no fewer than two semesters).
- 40 upper division credits (A minimum of 15 taken at the 300-400 course levels within the major at MSC).
- 2.80 cumulative GPA or higher in all MSC coursework
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A cumulative grade point average of 2.8 or higher must be maintained for each of 3 areas: content courses, education courses and overall GPA.
- A "C" or higher is required in all major and foundation courses.
- 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.
- Students must PASS the PLACE or PRAXIS II exam in the content area prior to beginning the internship. Also, ALL other coursework toward the degree must be successfully completed prior to the internship.

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 "B" 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 113	College Algebra	4*		
*3 credits apply to the General Ed requirements and 1 credit applies to Foundation Courses				
Humanities (3 semester hours)				
Social and Behavioral Sciences (6 semester hours)				
PSYC 233	Human Growth & Development	3		
(PSYC 233 required with a grade of "B" or better)				
GEOG 103 recommended				
History (3 semester hours)				
HIST				
Fine Arts (3 semester hours)				

Course No	Title	Sem.hrs	Grade	Term/Trns
Natural Sciences (7 semester hours, one course must include a lab)				
BIOL 105	Attributes of Living Systems	3		
BIOL 105L	Attributes of Living Systems	1		

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)				
SPCH 102	Speechmaking	3		
(SPCH 102 Required with a grade of "B" or better)				
FOUNDATION COURSES (17 semester hours)				
CHEM 131	General Chemistry	4		
CHEM 131L	General Chemistry Lab	1		
PHYS 101	Elementary Astronomy	3		
PHYS 111	General Physics	4		
PHYS 111L	General Physics Lab	1		
*MATH 113	College Algebra	1		
MATH 130	Trigonometry	3		

GEOLOGY – LEADING TO SECONDARY TEACHING LICENSURE MAJOR REQUIREMENTS (40 semester hours)
A "C" or higher is required in all major courses.

Required Core Courses (40 semester hours)				
*Choose either GEOL 103 or GEOL 104				
*GEOL		3		
GEOL 111	Principles of Physical Geology	3		
GEOL 111L	Principles of Physical Geology Lab	1		
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 340	Igneous and Metamorphic Petrology	3		
GEOL 340L	Igneous and Metamorphic Petrology Lab	1		
GEOL 402	Applications of Geomorphology	3		
GEOL 402L	Applications of Geomorphology Lab	1		
GEOL 444	Sedimentology and Stratigraphy	3		
GEOL 444L	Sedimentology and Stratigraphy Lab	1		
Electives (3 semester hours)				

Secondary Education Requirements (29 Semester Hours)
***Prerequisites:** ENGL 111, ENGL 112, SPCH 102, PSYC 233, EDUC 211 (all with a grade of B or better), MATH 113 or higher (with grade of C or higher, Declared major in Geology – Leading to Secondary Teacher Licensure and formal acceptance to the Teacher Education Program

Course No	Title	Sem.hrs	Grade	Term/Trns	
EDUC 211	Foundations of Education	2	_____	_____	20 Field Experience Hours
EDUC 342*	Pedagogy & Assessment: Secondary/K-12	3	_____	_____	20 Field Experience Hours
EDUC 343*	Teaching to Diversity	3	_____	_____	20 Field Experience Hours
EDUC 442*	Integrating Literacy Across the Curriculum	4	_____	_____	60 Field Experience Hours
EDUC 497*	Content Methodology Practicum	3	_____	_____	80 Field Experience Hours with EDUC 497D
EDUC 497D**	Methods of Teaching Secondary Science	2	_____	_____	
EDUC 499G*	Teaching Internship and Colloquium	12	_____	_____	600 Field Experience Hours

Students must PASS the PLACE or PRAXIS II exam in the content area prior to commencing the internship. Also, ALL other coursework toward the degree must be successfully completed prior to the internship.

**This course is only offered in the fall semester. It may be taken with either the 300-level or 400-level EDUC courses but must be taken before the student teaching semester.

***All EDUC prefix courses listed above must be completed with a grade of B or better to progress through the program sequence.

SUGGESTED COURSE SEQUENCING FOR A MAJOR IN GEOLOGY – LEADING TO SECONDARY TEACHER LICENSURE

This is a recommended sequence of course work. Certain courses may have prerequisites and/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 103	Weather and Climate **or**	
GEOL 104	Oceanography	3
GEOL 111	Principles of Physical Geology	3
GEOL 111L	Principles of Physical Geology Lab	1
ENGL 111	English Composition	3
MATH 113	College Algebra	4
KINE 100	Health and Wellness	1
		15

Spring Semester		Hours
GEOL 112	Principles of Historical Geology	3
GEOL 112L	Principles of Historical Geology Lab	1
ENGL 112	English Composition	3
MATH 130	Trigonometry	3
PSYC 233	Human Growth and Development	3
SPCH 102	Speechmaking	3
KINA	Activity	1
		17

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	4
PHYS 111L	General Physics Lab	1
		16

Spring Semester		Hours
GEOL 204	Computer Applications in Geology	3
BIOL 105	Attributes of Living Systems	3
BIOL 105L	Attributes of Living Systems	1
PHYS 101	Elementary Astronomy	3
General Education Fine Arts		3
General Education Social/Behavioral Science (GEOG 103 World Regional Geography Recommended)		3
KINA	Activity	1
		17

JUNIOR YEAR

Fall Semester		Hours
GEOL 301	Structural Geology	3
GEOL 301L	Structural Geology Lab	1
GEOL 331	Crystallography and Mineralogy	3
GEOL 331L	Crystallography and Mineralogy lab	1
General Education Natural Sciences		3
General Education History		3
*EDUC 211	Foundations in Education	2
		16

**Must be taken prior to acceptance into the Center for Teacher Education. Offered in summer, fall and spring semesters.

Spring Semester		Hours
GEOL 340	Igneous & Metamorphic Petrology	3
GEOL 340L	Igneous & Metamorphic Petrology	1
GEOL 444	Sedimentology and Stratigraphy	3
GEOL 444L	Sedimentology and Stratigraphy Lab	1
EDUC 342	Pedagogy/Assessment: Secondary/K-12	3
EDUC 343	Teaching to Diversity	3
Elective		3
		17

*May be taken prior to acceptance into the Center for

SENIOR YEAR

Fall Semester		Hours
GEOL 402	Applications of Geomorphology	3
GEOL 402L	Applications of Geomorphology Lab	1
General Education Humanities		3
EDUC 442	Integrating Literacy: Secondary/K-12 Art	4
EDUC 497	Content Methods Practicum	3
EDUC 497D*	Methods of Teaching Secondary Science	2
		16

Spring Semester		Hours
EDUC 499G	Teach. Intern/Colloquium: Secondary	12
		12

*Only offered in fall