

**ERTH 302 Petrology
Spring 2009**

Instructor: Dr. Sarah Hanson

Phone: 264-3944

Office: Jones 103

e-mail: slhanson@adrian.edu

Office Hours: 2:30 - 3:30 MWF

Required text: Petrology: by Blatt & Tracy

<u>Date</u>	<u>Lecture Topic</u>	<u>Reading</u>
Week 1 (Jan 12-16)	Introduction & Magma Properties	Ch 1
Week 2 (Jan 19-23)	No Class – MLK Day Chemistry & Classification of Igneous Rx	Ch 3
Week 3 (Jan 26-30)	Phase equilibria in magmatic systems Evolution of Magmas – AFC Processes	Ch 4,5
Week 4 (Feb 2-Feb 6)	Evolution of Magmas – AFC Processes Exam 1	Ch 4,5
Week 5 (Feb 9-13)	Intrusive Rx Eruption Dynamics	
Week 6 (Feb 16-20)	Extrusive igneous rocks Exam 2	
Week 7 (Feb 23-27)	Igneous Rocks of the Oceanic Lithosphere Igneous Rocks at Convergent Boundaries	Ch 8 Ch 9
Week 8 (Mar 2-Mar 6)	Not Quite Spring Spring Break – No Class! Not Quite Spring Spring Break – No Class!	
Week 9 (Mar 9-13)	Intraplate Intrusive Suites Intraplate Extrusive Volcanics	Ch 10
Week 10 (Mar 16-20)	Exam 3 Metamorphism - occurrences, types, protoliths	Ch 18
Week 11 (Mar 23-27)	M/M facies, isograds & PTt paths M/M Assemblages, projections & rxns	Ch19 Ch20,21
Week 12 (Mar 30- Apr 3)	M/M Assemblages, projections & rxns Barrovian Style metamorphism - regional m/m	Ch20,21 Ch 23
Week 13 (Apr 6-10)	Buchan Style metamorphism Regional Burial m/m	Ch 23
Week 14 (Apr 13-17)	Metamorphism of Calcareous Sedimentary Rx Metamorphism of Calcareous Sedimentary Rx	Ch22,24 Ch22,24
Week 15 (Apr 20-24)	Catch up, Review, etc. No Class – Rochester Mineralogical Symposium	

Final Exam: Wednesday 29 April; 3:30-5:30

Lab Schedule

<u>Date:</u>	<u>Topic</u>	<u>Reading</u>
Jan 15	No Lab	
Jan 22	Lab 1: Texture and Classification of Igneous Rocks	Ch's 2 & 3
Jan 29	Lab 2: Fractional Crystallization	
Feb 5	Lab 3: Fractional Crystallization	
Feb 12	Lab 4: Calc-alkaline plutonic rocks	
Feb 19	Lab 5: Calc-alkaline volcanic rocks	
Feb 26	Lab exam 1	
Mar 5	Nearly Spring Spring Break - No Lab!	
Mar 12	Lab 6: Classification and textures of metamorphic rocks	Ch 18
Mar 19	Lab 7: Graphical representation of m/m diagrams	
Mar 26	Lab 8: Metamorphosed pelitic rocks	
Apr 2	No lab – field trip	
Apr 9	Lab 9: Metamorphosed mafic igneous and calcareous rocks	
Apr 16	Review for Lab Final	
Apr 23	Lab Final	

Course Policies and Procedures

Attendance:

It is imperative that you attend all scheduled classes and labs. Attendance will not be taken in lecture. However, it is **your** responsibility to get any homework assignments which may have been given in class and the lecture material (some of which may not be covered in the text). Attendance **will** be taken in lab. If you miss a lab, it is **YOUR** responsibility to get and complete the assignment in the allotted time. Lab Assignments will be due at the beginning of the following lab period. Points **WILL** be deducted for late assignments. Quizzes will generally take place during the first ten minutes of lab. No extra time will be allowed for late arrivals.

Exams:

You **MUST** notify me in advance if you are going to miss an exam. Make-up exams will be given **ONLY** if you have a substantiated emergency (i.e. medical emergency, death in family etc.).

Grades:

Lecture:

3 exams @ 15 % each	45%
Homework	10%

Lab:

Lab exercises	15%
2 exams @ 15% each	30%

If necessary, I will adjust the grade scale for each exam *upwards* to a class mean of 75%. No extra credit assignments will be given. Final grades will be calculated as follows:

94 – 100%	A
90 – 93%	A-
87 – 89 %	B+
83 – 86%	B
80 – 82%	B-
77 – 79%	C+
73 – 76%	C
70 – 72%	C-
67 – 69%	D+
63 – 66%	D
60 – 62%	D-
Below 60%	F