

Spring, 2011

# Stratigraphy and Basin Analysis

## GEOLOGY 311

J. Peterson (Harrington rm 211; 920-424-4463; email: petersoj@uwosh.edu)  
Office hrs. 10:20 - 11:20 MWF

**Text:** *Principles of Sedimentology and Stratigraphy*, by Sam Boggs, Jr. (required), assigned readings  
Recommended Texts: *Principles of Sedimentary Basin Analysis* by A.D. Miall  
*Facies Models* by R.G. Walker

**Class Time:** 11:30-12:30 MW (lecture)  
8:00-10:10 R (lab)

**Exams (50%):** A total of three exams will be administered throughout the semester. Tests will be a combination of short-answer/essay format with critical thinking questions.

**Basin Analysis Projects (30%):** Two basin analysis projects will be assigned throughout the semester. These projects will include constructing a stratigraphic column, geological cross-section, and writing a report.

**Lab Assignments (20%):** Weekly lab assignment will constitute 100 cumulative points.

### Lecture schedule: (subject to modification)

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Jan.	Mon	31	Course Intro	
Feb.	Wed	2	What is Stratigraphy?	Chap. 1.2, 1.3
	Mon	7	Siliciclastic rocks	Chap. 5
	Wed	9	Carbonate rocks	Chap. 6
	Mon	14	Facies concepts	Chap. 8
	Wed	16	Exam 1	
	Mon	21	Accommodation	
	Wed	23	Isostasy	
	Mon	28	Physical Stratigraphy	Chap. 13
Mar.	Wed	2	Lithologic Correlation	Chap. 13
	Mon	7	Biostratigraphy	Chap. 17
	Wed	9	Geophysical Methods	Chap. 14
	Mon	14	Exam 2	
	Wed	16	North American Craton	
	Mon	21	Spring Break	
	Wed	23	Spring Break	
	Mon	28	Basins and late Pre-Cambrian stratigraphy	
	Wed	29	The Cambrian	
Apr.	Mon	4	The Ordovician	
	Wed	6	Lower Paleozoic controls on stratigraphy	
	Mon	11	Plate tectonics in the lower Paleozoic	
	Wed	13	Silurian Stratigraphy	
	Mon	18	Devonian developments	
	Wed	20	Mid-Paleozoic Tectonics	
	Mon	25	Pangaeian settings	
	Wed	27	Mesozoic Stratigraphy	
May	Mon	2	Mesozoic Stratigraphy	
	Wed	4	Cenozoic Stratigraphy	
	Mon	9	Cenozoic Stratigraphy	
	Wed	11	Exam 3	

**Lab schedule:** (subject to modification)

Feb.	3	<i>No Lab</i>
	10	Technical writing
	17	Siliciclastic rocks
	24	Carbonate rocks
Mar.	3	Correlation & Biostratigraphy
	10	Sequence Stratigraphy
	17	Facies Models: Terrestrial
	24	<i>Spring Break</i>
	31	Facies Models: Transitional
Apr.	7	Facies Models: Marine
	14	Appalachian Virtual Field Trip
	21	Appalachian Virtual Field Trip
	28	Utah Virtual Field Trip
May	5	Utah Virtual Field Trip
	12	<i>No Lab</i>