

Fall 2013

**GEOL 692:
Tectonics and Basin Evolution**

**South Dakota School of Mines
and Technology**

**Department of Geology and
Geological Engineering**



Instructor: Dr. Zeynep Oner, Assistant Professor

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Office hours: MF:1:00-2:30 PM

Class schedule: MWF 10:00-10:50 Room MI 324

Recommended Textbooks:

Allen, P.A., and Allen, J.R., 2005, Basin Analysis: Principles and Applications, 2nd ed., Blackwell: Malden, MA, 549 p.

Busby, C.J., and Azor, A. P., eds., 2012, Tectonics of sedimentary basins: Recent Advances, Wiley-Blackwell, 664 p.

It is NOT mandatory but highly recommended to have the listed reading material in this seminar course. Especially, Allen& Allen (2005) provides a great resource of knowledge and you may want to have such comprehensive book on your bookshelf. The listed material will give you detailed information about different types of sedimentary basins and you will better understand the relationship between tectonics and basin evolution.

Course Objectives:

In this graduate-level seminar course, we will mainly focus on different types of sedimentary basins and their evolution in various tectonic settings. Every week, some scientific reading material will be provided with a questionnaire and we will have interdisciplinary discussions regarding the week's subject. The reading material will include both recently-published papers and some older, theoretical papers. As we read more papers throughout the semester, you will learn how to get important information from assigned papers and provided questionnaire will help you to understand and criticize the published work. Reading assignments and scientific discussions will help us to keep up with advances in sedimentary basin analysis, while learning about fundamentals of basin evolution.

Course Requirements & Expectations:

a) Reading Assignments and Class Attendance

Since there will be no mid-term or final exam in this seminar course, reading assignments and in-class discussions are crucial and your attendance is very important for evaluation of your performance during the semester. So, I encourage you to use different sources to understand the reading material and make time for your questions to

me before or after the class. The most important goal in this class is to make sure you LEARN the material.

Every week, the required reading material will be posted online or sent via email and you will be responsible for in-class discussions and assignments related to the provided reading material. If you find an interesting article or book related to the course content, please do not hesitate to bring it in! Your contribution would always be appreciated.

LATE assignments will be subjected to grade reduction of %10 for each day, unless you have an acceptable excuse and inform your instructor ahead of time. If you do not turn in your assignment 3 days later than the due date without any acceptable excuse, it may not be accepted.

ATTENDANCE: If you MUST miss a class because of an emergency or any other valid excuse (university related activities, illness etc.), please let me know about your situation before the class you will miss or ASAP afterwards. So, we can discuss about our options to make up your missing class.

EXTRA CREDITS: There will be some extra credit opportunities during the semester and they will be announced in the class. Your extra effort will always be credited, as well.

I believe all students at SDSM&T are smart and hardworking people, however I have to kindly remind that COPY & PASTE ANSWERS are NOT acceptable in this class. I encourage you to use your own knowledge and skills, and do your best to improve your critical thinking ability during in-class discussions.

b) Research project and presentation

Each individual will be responsible for a small-scale research project proposal at the end of the course. Your proposal can be 10 or 15 (max) page including 8-10 pages for text part and 2-5 pages for figures. The details and outline of the proposal will be explained in the class later in the semester.

Grading policy

Reading assignments: %50

Research project: % 20

Presentation: %20

Attendance: %10