

# GEOL 770 – Sedimentary Basins, Sec 1001, Spring 2016

T-R 4:00 PM– 5:15 PM, TEC 104

**Office Hours:** Wednesday 12:00-2:00 p.m. and by appointment

**Course Format:** Lecture twice a week

**Required Textbook:** No required textbook but we will be following the format of Tectonics of Sedimentary Basins, edited by Busby and Ingersoll 1995, which is now out of print.

**Prerequisites:** Graduate standing or consent of instructor

**Purpose of this Class:** This class is designed to give you an introduction to the tectonic controls on the formation of sedimentary basins. You will also be introduced to the stratigraphic architectural models of each of the basins we discuss. I want each of you to come away with a library of primary and secondary literature so that if you encounter a future research project that you will have the basics to get you started in your research.

**Learning Outcomes:** After successfully completing this course, students will be able to characterize the tectonic setting of a sedimentary basin which is the focus of their graduate studies. They will know the primary literature of the discipline of sedimentary basin analysis.

**Skills:** Reading, Synthesis of previous research, Application of that knowledge toward a research topic

**Grading policy:** Final grades will be assigned according to the following schedule.

<u>Grade</u>	<u>Semester average</u>	<u>Grade</u>	<u>Semester average</u>
A	over 93	C	between 73 and 77
A-	between 90 and 93	C-	between 70 and 73
B+	between 87 and 90	D+	between 67 and 70
B	between 83 and 87	D	between 63 and 67
B-	between 80 and 83	D-	between 60 and 63
C+	between 77 and 80	F	less than 60 ( <b>see not 1 below</b> )

**Final Grades will be computed as follows:**

Attendance	20%
Participation	30%
Basin Presentation	25%
Basin Report	<u>25%</u>
	100%

**Notes:**

1. This is a seminar style course, which means you are responsible for teaching yourself the material. The instructor's job is to introduce the topics and to guide discussion of readings. Therefore it is important that you keep up on the readings so that you can participate in the course discussions.
2. Participation is weighted the heaviest so that I can ensure that you are doing the readings. I will be keeping track each class of who is participating in discussion. If you don't contribute you don't get the points for that day.
3. The Basin Report/Presentation will be a Basin analysis of a basin related to your graduate studies. I want you to be able to come away with some research material directly applicable to your studies. The particulars of these assignments will be handed out separately.
4. Come to this class with a positive outlook and be ready to read. The best scientists are the ones who know the most about their field, the way you get there is by reading!

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## CLASS SCHEDULE

Date	Lecture Topic
<b>Week 1</b>	
Jan. 19	Introduction, Syllabus, Course expectations
Jan. 21	Overview: Tectonics of Sedimentary Basins
<b>Week 2</b>	
Jan. 26	Fossil Rifts
Jan. 28	Continental Rifts and Proto-Oceanic Rifts
<b>Week 3</b>	
Feb. 2	Continental Terraces and Rises
Feb. 4	Trenches and Trench-Slope Basins
<b>Week 4</b>	
Feb. 9	Forearc Basins
Feb. 11	Intra-Arc Basins
<b>Week 5</b>	
Feb. 16	Interarc and Backarc Basins
Feb. 18	Retroarc Foreland and Related Basins
<b>Week 6</b>	
Feb. 23	Retroarc Foreland and Related Basins
Feb. 25	Remnant Ocean Basins
<b>Week 7</b>	
Mar. 1	Collision-Related Foreland Basins
Mar. 3	Strike-slip Basins
<b>Week 8</b>	
Mar. 8	Strike-slip Basins
Mar. 10	Intracratonic Basins
<b>Week 9</b>	
Mar. 15	Intracratonic Basins
Mar. 17	Hinterland Basins
<b>Week 10</b>	
Mar. 22	Spring Break
Mar. 24	Spring Break
<b>Week 11</b>	
<b>April 3<sup>rd</sup> Final Day to Drop</b>	
Mar. 29	Basin Analysis
Mar. 31	Detrital Zircon Geochronology
<b>Week 12</b>	
Apr. 5	Sediment provenance studies
Apr. 7	Subsidence History
<b>Week 13</b>	
Apr. 12	Architectural Element Analysis
Apr. 14	Catch up/ Work on Basin Reports
<b>Week 14</b>	
Apr. 19	Basin Presentations
Apr. 21	Basin Presentations
<b>Week 15</b>	
Apr. 26	Basin Presentations
Apr. 28	Basin Presentations
<b>Week 16</b>	
May 3	Basin Presentations
May 5	Basin Presentations

**Basin Reports Due by 5:15 PM**

**Changes to Syllabus:** The above lecture schedule is tentative; adjustments to the schedule of topics and reading assignments may be made in accordance with the rate of progress in the classroom. The instructor also reserves the right to change a lecture topic to reflect world events. Students will be provided with an updated syllabus if significant changes are necessary.

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## Logistics and Policies

**1. Participation** - Students in this class will have different backgrounds and levels of educational training. As a result, you may find some material difficult, feel that you are already familiar with some of the concepts, or have personal experiences that can inform us all. Whatever your situation, please share your position with us through class participation. Most importantly, however, if you are confused about a concept, **please ask questions** in class for clarification and further explanation. You will not be alone in your confusion. There are many ways to present this material, and I will attempt to find one that works for you.

**2. Attendance** - It is important that you attend class daily because we cover a lot of material, and I will provide guidance for reading assignments. You are responsible for all material covered in lectures no matter what causes your absence. If you miss a lecture, get the notes from a classmate. Topics covered may vary from the schedule somewhat.

**3. Religious Holidays Policy** - Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor within the first 14 calendar days of the course for fall and spring courses (excepting modular courses), or within the first 7 calendar days of the course for summer and modular courses, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

**4. Official Extracurricular Activity** - All students who represent UNLV at any official extracurricular activity have the opportunity to make up an assignment. However, you must provide official written notification to me at least 1 week prior to the missed class(es).

**5. Learning Environment** - The classroom is intended to be a place of learning. As such, and as specified in the UNLV Undergraduate Catalog, no pagers, cell phones, or other potentially disruptive devices are allowed in either lecture or laboratory. Student usage of laptop computers, recording equipment, or similar devices is only allowed with explicit permission of the instructor, and is restricted to taking notes for this course. Disruptive behavior including, but not limited to those described above, chatting, sleeping, watching video, playing games or texting may result in an administrative withdrawal from the course.

**6. Administrative Drops/Classroom Conduct** - You are required to be familiar with university policies and procedures in the current UNLV Undergraduate Catalog. Importantly, we follow the policies on Administrative Drops/Classroom Conduct as stated in the most recent UNLV Undergraduate Catalog. Any student that does not comply with these requirements, and conducts themselves in a manner that is disruptive and interferes with the right of other students to learn, or of the instructor to teach will be administratively dropped from the course.

**7. Non-enrolled guests** - Students are not allowed to bring guests, including children to either lecture or laboratory.

**8. Academic Misconduct** - Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the Student Academic Misconduct Policy (approved December 9, 2005) located at: <https://www.unlv.edu/studentconduct/student-conduct>. This course operates under a "zero tolerance" policy, meaning that **if a student commits cheating or plagiarism they will receive a grade of F for the class.**

**9. Disability Resource Center (DRC)** — The UNLV Disability Resource Center (SSC-A 143, <http://drc.unlv.edu/>, 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

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**10. Incomplete Grades** - The grade of I—Incomplete—can be granted when a student has satisfactorily completed three-fourths of course work for that semester/session but for reason(s) beyond the student's control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester for undergraduate courses. Graduate students receiving "I" grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

**11. UNLV Writing Center** - One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: <http://writingcenter.unlv.edu/>.

**12. Tutoring and Coaching** - The Academic Success Center (ASC) provides tutoring, academic success coaching and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, visit <http://www.unlv.edu/asc> or call 702-895-3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of the SSC (ASC Coaching Spot). Drop-in tutoring is located on the second floor of the Lied Library and College of Engineering TEB second floor.

**13. Copyright** - The University requires all members of the University Community to familiarize themselves with and to follow copyright and fair use requirements. **You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws.** Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://www.unlv.edu/provost/copyright>.

**14. Transparency in Learning and Teaching** — The University encourages application of the transparency method of constructing assignments for student success. Please see these two links for further information:  
<https://www.unlv.edu/provost/teachingandlearning>  
<https://www.unlv.edu/provost/transparency>

**14. Rebelmail** - By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. **Emailing within WebCampus is acceptable.**

**15. Library Resources** - Students may consult with a librarian on research needs. For this class, the subject librarian is [https://www.library.unlv.edu/contact/librarians\\_by\\_subject](https://www.library.unlv.edu/contact/librarians_by_subject). UNLV Libraries provides resources to support students' access to information. Discovery, access, and use of information are vital skills for academic work and for successful post-college life. Access library resources and ask questions at <https://www.library.unlv.edu/>.

**16. Final Examinations** - The University requires that final exams given at the end of a course occur at the time and on the day specified in the final exam schedule. See the schedule at: <http://www.unlv.edu/registrar/calendars>.