

GEOL 6107: Caribbean Tectonics

- **Professor:** Alberto M. López Venegas
 - **Office:** F-417B
 - **Office Hours:**
 - Tuesdays: 8:00 - 9:00 am, 1 - 3pm
 - Thursdays: 8:00 - 9:00 am, 1 - 3pm
 - **Phone:** (787) 832-4040 xt. 2704
 - **E-mail:** alberto.lopez3@upr.edu
- **Classroom:** F-303
- **Section:** 036 Tuesdays & Thursdays 9-10:15am
- **Semester:** Fall 2016
- **Course Description:** Graduate course focusing on Caribbean region plate tectonics: Its origin, evolution, boundaries, characteristics and current state.
- **Pre/Co-requisite:** None
- **Course Objectives:**
 - Understand the concept of the Theory of Plate Tectonics, how it evolved and the processes resulting from it.
 - On completion, the student must be able to identify the layered internal structure of the planet and how it relates to motion of the plates on the surface.
 - Familiarize with the processes of Plate Tectonics in the Caribbean region.
 - Understand the current knowledge of Caribbean plate evolution.
- **Textbook:** Several as references. Journal articles compiled on file at the end of syllabus.
- **Instructional method:** Lectures and discussion
- **Language:** Spanish/English
- **Evaluations:** Total points = 225 in 4 homeworks (variable grades)
 - HW1 (25 pts): Exercise on plate motions and linear velocities
 - HW2 (100 pts): (December 6, 2016) [NSF-EAR](#) type proposal
 - Individually assigned
 - Propose to study a tectonic problem in the Caribbean region
 - [Rubric](#) to follow for evaluation
 - A letter of intent or summary of proposed study (25 pts) to be submitted Thursday, October 13, 2016
 - HW3 (50 pts): (December 6, 2016) Proposal presentations
 - Individually assigned
 - [Rubric](#) to follow for evaluation
 - HW4 (50 pts): (December 8, 2016) Paper summaries in Website content
- **Grade:** Standard curve:
 - 90 <= A <= 100
 - 80 <= B <= 89
 - 65 <= C <= 79
 - 55 <= D <= 64
 - F <= 54

Topics and presentations:

- General Overview of Plate Tectonics
 - [Brief History](#)
 - [Interior of the Planet](#)
 - Plate Boundaries
 - [Divergent](#)
 - [Convergent](#)
 - [Mechanics & Kinematics](#)
 - [References:](#)
 - Minster, J. B., and T. Jordan, Present-Day Plate Motions, *Journal of Geophys. Res.*, v. 83, no. B11, 1978.
 - DeMets, C., R.G. Gordon, D.F. Argus, and S. Stein, Current plate motions, *Geophys. J. Int.*, v. 101, pp. 425-478, 1990.
 - Sella, G. F., T. H. Dixon, and A. Mao, REVEL: A model for Recent plate velocities from space geodesy, *Journal of Geophys. Res.*, v. 107, no. B4, 2002.
 - DeMets, C., R. G. Gordon, and D. F. Argus, Geologically current plate motions, *Geophys. J. Int.*, v. 181, pp. 1-80, 2010.
- Tectonic Overview of the Caribbean
 - General description of its evolution
 - Boundaries
- Geologic Overview of the Caribbean
 - Crustal provinces, basins, ridges, and rises
- Selected Papers on Caribbean Plate Geology: Assigned to each student for presentation and discussion:
 - Geology by Caribbean regions:
 - Northeastern Caribbean
 - Lesser Antilles

- Southern Caribbean
- Central America
- Selected Papers on Caribbean Plate Tectonics: Assigned to each student for presentation and discussion:
 - Tectonics by Caribbean Regions:
 - Northeastern Caribbean
 - Lesser Antilles
 - Southern Caribbean
 - Central America

Caribbean Geology & Tectonics - Spring 2014						
OfficeHrs						
Today	◀	▶	September 2016		▼	Print Week Month Agenda
Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30	31	Sep 1	2	3
		07:00 Office Hours 09:00 Convergence 13:00 Office Hours		09:00 Mechanisms of Pl 13:00 Office Hours		
4	5	6	7	8	9	10
		07:00 Office Hours 09:00 History of Caribb 13:00 Office Hours		09:00 Caribbean Tector 13:00 Office Hours		
11	12	13	14	15	16	17
		07:00 Office Hours 09:00 Geology Papers 8 13:00 Office Hours		09:00 Geology Papers 8 13:00 Office Hours		
18	19	20	21	22	23	24
		07:00 Office Hours 09:00 Geology Papers 2 13:00 Office Hours		13:00 Office Hours		
25	26	27	28	29	30	Oct 1
		07:00 Office Hours 09:00 Geology Papers 4 13:00 Office Hours		09:00 Tectonic Papers 13:00 Office Hours		

Events shown in time zone: Puerto Rico

Google Calendar

Regulations and Policies:

- Class attendance is compulsory. The University of Puerto Rico, Mayagüez Campus, reserves the right to deal at any time with individual cases of non-attendance. Professors are expected to record the absences of their students. Frequent absences affect the final grade, and may even result in total loss of credits. Arranging to make up work missed because of legitimate class absence is the responsibility of the student (Bulletin of Information Undergraduate Studies).
- Absence from examinations: Students are required to attend all examinations. If a student is absent from an examination for a justifiable reason acceptable to the professor, he or she will be given a special examination. Otherwise, he or she will receive a grade of zero or "F" in the examination missed (Bulletin of Information Undergraduate Studies)
- Excuses from class or examinations: ONLY WRITTEN EXCUSES WILL BE ACCEPTED. If a student is absent from an examination, he/she will have the opportunity to take a make-up test NO LATER than 5 days after the group took the exam. Make-up tests will be given only by appointment.
- **Policies on electronic devices:** Radios, tape recorders, and other audio or video equipment are not permitted in the classroom at any time. No cell phones are allowed to be in the ring mode during classes, neither students talking or sending messages with cell phones or other electronic device. The use of laptop computers during class is not allowed.
- **Cheating:** Cooperative work is not permitted on the quizzes or examinations. Cheating will be dealt with harshly. **All instances of cheating on examinations will be immediately reported to the Dean of Arts and Sciences for review.** There will be no exceptions to this policy.

Advice from the professor: Please come to class each time. The three hours per week in this class are less than 2% of your time. No matter what you do in life, this class will help you understand the world around you. You need to buy the book. You need to read the book. You need to ask questions, talk to your classmates.

According to Law 51 Students will identify themselves with the Institution and the instructor of the course for purposes of assessment (exams) accommodations. For more information please call the Student with Disabilities Office, which is part of the Dean of Students office (Chemistry Building, room 019) at (787)265-3862 or (787)832-4040 extensions 3250 or 3258.