



SAINT LOUIS UNIVERSITY
MADRID

EAS 1930 M01: Special Topics in Oceanography
Spring 2018

Class Days and Time: Th 11:00-12:00

Classroom: TBA

Prerequisite(s): Concurrent enrollment in EAS-1050 Introduction to Oceanography

Credit(s): 3

Instructor: Monica Perez-Bedmar

Instructor's Email: monica.perezbedmar.1@slu.edu

Instructor's Campus Phone: 91 554 58 58, ext. 266

Office: PRH, Science Office, First Floor

Office Hours: Th 12:00-13:00

Course Description: This Honors course will provide a more in depth analysis of the topics discussed during the Introduction to Oceanography course. A field trip will also complement the understanding of present day issues in Oceanography from a Spanish perspective.

Course Goals and Student Learning Outcomes: To have students analyze in depth several topics in oceanography which include, but are not limited to: energy harvested from the oceans, protection of natural marine systems, coastal erosion issues, and impacts of structures built in the ocean. The research conducted will have to entail a project already in function and apply it to a possible solution in another area. Possible topics for research are:

- Coastal erosion. Examples of coastal areas restored and the application of these solutions to degraded areas.
- Energies harvested from the ocean. Possible areas of these energy harvesting. Applying these solutions to areas where energy is lacking.
- Restoration of marine or coastal ecosystems. The value of these coastal and/or marine areas. The cost/value of protecting them.

On successful completion, the students should:

- A familiarity with basic terminology and descriptions of materials and processes in the subdisciplines of geological, physical, chemical and biological oceanography.
- Familiarity with the primary scientific literature that relates to their project.
- To gain experience in diverse aspects of completing a substantive research project.
- To increase problem solving and the ability to apply them to real life situations.

The will have to result in a 20-page proposal for providing a solution to the issue that the students have chosen. It will also have to be presented to the Science Faculty, in a formal presentation.

Saint Louis University - Madrid Campus is committed to excellent and innovative educational practices. In order to maintain quality academic offerings and to conform to relevant accreditation requirements, the Campus regularly assesses its teaching, services, and programs for evidence of student learning outcomes achievement. For this purpose anonymized representative examples of student work from all courses and programs is kept on file, such as assignments, papers, exams, portfolios, and results from student surveys, focus groups, and reflective exercises. *Thus, copies of student work for this course, including written assignments, in-class exercises, and exams may be*

kept on file for institutional research, assessment and accreditation purposes. If students prefer that Saint Louis University - Madrid Campus does not keep their work on file, they need to communicate their decision in writing to the professor.

Required Texts and Materials: Reading texts and materials will be posted on Blackboard. Please make sure that you are able to access Blackboard.

Attendance Policy:

1. Students are encouraged to participate in class discussions and to ask questions.
2. Announcements may be made during the semester.
3. Syllabus, reading and articles are subject to change.
4. Students are responsible for the lecture material, handouts, homework and assigned reading.
5. It is mandatory to attend all classes unless a reasonable excuse is given.
6. Make up exams are not given. Students who legitimately miss an exam, due to a doctor's visit or family emergency must provide written documentation of the circumstances. A letter from the university counselor is accepted. Exams that are missed illegitimately result in a score of F. Grades for these students will be based on the remaining exams. Missing more than one exam results in an F grade.

Course Requirements and Grading Rationale/System:

- The grade will be obtained from the following areas:
- Mid-term : 20%
- Final: 20 %
- Paper: 20%
- Field trip summaries: 15%
- Article reviews: 10%
- Attendance, class participation: 5%

Grading Scales from Exams

A	93-100%
A-	90-92.9%
B+	87-89.9%
B	83-86.9%
B-	80-82.9%
C+	77-79.9%
C	73-76.9%
C-	70-72.9%
D	60-69.9%
F	0-59.9%

E-mail: Campus and course announcements will often be handled by e-mail. Students should check their "@slu.edu" e-mail regularly.

University Statement on Academic Integrity: Academic integrity is honest, truthful and responsible conduct in all academic endeavors. The mission of Saint Louis University is "the pursuit of truth for the greater glory of God and for the service of humanity." Accordingly, all acts of falsehood demean and compromise the corporate endeavors of teaching, research, health care and community service via which SLU embodies its mission. The University strives to prepare students for lives of personal and professional integrity, and therefore regards all breaches of academic integrity as matters of serious concern.

The governing University-level Academic Integrity Policy can be accessed on the Provost's Office [website](#) at:. Additionally, SLU-Madrid has posted its academic integrity policy online: <http://www.slu.edu/madrid/academics>. As a member of the University community, you are expected to know and abide by these policies, which detail definitions of violations, processes for reporting violations, sanctions and appeals.

The professor will review these matters during the first weeks of the term. Please direct questions about any facet of

academic integrity to your faculty, the chair of the department of your academic program or the Academic Dean of the Madrid Campus.

University Title IX Statement: Saint Louis University and its faculty are committed to supporting our students and seeking an environment that is free of bias, discrimination, and harassment. If you have encountered any form of sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the University. If you speak with a faculty member about an incident of misconduct, that faculty member must notify SLU's Title IX deputy coordinator, Marta Maruri, whose office is located on the ground floor of Padre Rubio Hall, Avenida del Valle, 28 (mmaruri@slu.edu; 915-54-5858, ext. 213) and share the basic fact of your experience with her. The Title IX deputy coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus.

If you wish to speak with a confidential source, you may contact the counselors at the SLU-Madrid's Counseling Services on the third floor of San Ignacio Hall (counselingcenter-madrid@slu.edu; 915-54-5858, ext. 230) or Sinews Multiplettherapy Institute, the off-campus provider of counseling services for SLU-Madrid (www.sinews.es; 917-00-1979). To view SLU-Madrid's sexual misconduct policy and for resources, please visit the following web address:<http://www.slu.edu/Documents/Madrid/campus-life/SLUMadridSexualMisconductPolicy.pdf>.

Students with Special Needs: In recognition that people learn in a variety of ways and that learning is influenced by multiple factors (e.g., prior experience, study skills, learning disability), resources to support student success are available on campus. Students who think they might benefit from these resources can find out more about:

- Course-level support (e.g., faculty member, departmental resources, etc.) by asking your course instructor.
- University-level support (e.g., tutoring/writing services, Disability Services) by visiting the Academic Dean's Office (San Ignacio Hall) or by going to <http://www.slu.edu/madrid/learning-resources>.

Students with a documented disability who wish to request academic accommodations must contact Disability Services to discuss accommodation requests and eligibility requirements. Once successfully registered, the student also must notify the course instructor that they wish to access accommodations in the course. Please contact Disability Services at disabilityservices-madrid@slu.edu or +915 54 58 58, ext. 230 for an appointment. Confidentiality will be observed in all inquiries. Once approved, information about the student's eligibility for academic accommodations will be shared with course instructors via email from Disability Services. For more information about academic accommodations, see "Student Resources" on the SLU-Madrid webpage.

Note: Students who do not have a documented disability but who think they may have one are encouraged to contact Disability Services.

Mandatory Trips/Activities: A visit to Spain's southeastern coast to study the main environmental issues the Mediterranean Sea is facing. The field trip includes visit to oceanography institutes, a desalination site, natural reserves and natural parks. The excursion includes diving exercise at one of the most important Mediterranean reserves, Islas Hormigas, off the coast of Murcia, which provides the opportunity – weather permitting – to snorkel in its crystal blue waters and identify the different organisms studied in the course. The trip also includes kayaking along the most developed Mediterranean coastlines, to identify coastal issues and successful restoration projects. Price includes transportation, lodging, excursions included in final itinerary, and breakfast

Students enrolled in this class must participate and make payment for all mandatory trips/activities. The prices posted on the web are approximate; and the final price will be based on the number of students enrolled on the last day of the Add/Drop period. All students, including those who withdraw from the class after this date, are required to pay these fees, which are non-refundable, unless the trip is cancelled due to low enrollment. Please review SLU-Madrid's trip policies, available on-line.

Spring 2018 Course Schedule:

Friday, January 19	Did life start salty? The origin of the earth, the oceans and life. Could there be life elsewhere?
Sunday, January 21	Last Day to Drop a Class Without a Grade of W and /or Add a Class, choose Audit (AU) or Satisfactory/Unsatisfactory (S/U) Options
Wednesday, January 24	Continental Margins and Ocean Basins: Continental Margins and Ocean Basins and Consequences of Change. Features of the sea floor.
Wednesday, January 31	Coastal Environments and Issues: The physical environment of the United States coastline...coasts, estuaries, beaches, waves, tides... trends in population development along the coast...Resources of the near shore environment. Comparison between Spain and the U.S. Coastal Issues.
Wednesday, February 7	Midterm I
Wednesday, February 14	Ocean Circulation: Ocean Currents: what are they, how do they form, and what is their role in the global scheme of things? Wind-driven ocean circulation and upwelling. Density driven circulation. The great conveyor belt.
Thursday, February 22	Fall Break
Friday, February 23	
Saturday February 24	
Sunday, February 25	
Tuesday, February 27	Midterm Grades Due.
Wednesday, February 28	Climate Change: Fact or fiction? Historical trends. Measurements of climate change. Consequences and solutions.
Wednesday, March 7	Midterm II
Friday, March 9	Last Day to Drop a Class and Receive the Grade of W.
Wednesday, March 14	A View of Life in the Oceans: Primary productivity of the oceans. Different types of primary producers -- bacteria; diatoms, dinoflagellates, coccolithophores and plants; Measuring primary production.
Wednesday, March 21	Zooplankton and Marine Invertebrates: Types of zooplankton and marine invertebrates: Ways of feeding, vertical migration, bioluminescence, life histories - holoplankton vs meroplankton; lifestages. Food chains and food webs.
March 26- April 1	Semana Santa holiday (University closed)
Wednesday, April 4	Nekton, the free swimmers : Fish - variety of forms, some examples: demersal forms (cod), pelagic forms (tuna, swordfish), small pelagics (sardines, anchovies). Types, physiological characteristics, geographical distribution. Are sharks a threat to humans or humans threats to sharks? Fall Registration Opens!
Wednesday, April 11	Ecosystems in the Sea: Oligotrophic central gyres - the ocean deserts; Nutrient-rich subpolar regions; Upwelling regions; Coastal regions; Estuaries. The benthos - in /on the sediments; Vents, reefs
Wednesday, April 18	Oceanic Resources and: Marine life, food chains, productivity, types of resources, regulations and protection. Emphasis is on the physical environment, and influence of human population, exploitation
Wednesday, April 25	Group presentations
Wednesday, May 2	University Closed
Thursday, May 10 (15:30-18:30)	FINAL EXAM
Sunday, May 13	Grades Due to Registrar

SPRING 2018 FINAL EXAM SCHEDULE

SPRING 2018					
	4 May (Fr)	7 May (Mn)	8 May (Tu)	9 May (Wd)	10 May (Th)
08:30-11:30	Mn classes that meet at 9:00 & 9:30	Mn classes that meet at 10:00	Mn classes that meet at 11:00 & 11:30	Tu classes that meet at 9:30	Tu classes that meet at 8:00
12:00-15:00	Tu classes that meet at 11:00	Mn classes that meet at 13:00	Tu classes that meet at 14:30	Mn classes that meet at 12:00 & 12:30	Tu classes that meet at 12:30
15:30-18:30	Mn classes that meet at 14:30	Tu classes that meet at 17:00 & 17:30	Mn classes that meet at 16:00	Tu classes that meet at 16:00	Mn classes that meet at 17:30
19:00-22:00	---	---	Mn classes that meet at 18:30 & 19:00	Tu classes that meet at 19:00	