University of Florida
SUR 6346 (3 credits)
Marine Geomatics

Summer B 2023 Syllabus
Delivery Format: Online, asynchronous
Optional Live Meeting day: Thursday, 7:00 PM-8:15 PM
https://ufl.instructure.com/courses/479234

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Office Hours: Thursday, 7:00 PM-9:00 PM
Preferred Course Communications: email

Prerequisites
There are no prerequisites for this course.

PURPOSE AND OUTCOME

Course Overview
An introduction to the technologies, concepts, and methods required to acquire, analyze, and manage geographic data used in seafloor mapping and imaging. Background on the capabilities and limitations of different data collection systems will be provided, as well as for the other types of sensors necessary to collect accurate information. Topics will include marine positioning, underwater acoustics, sonars, hydrographic standards, and hydrographic survey design. A particular emphasis is given to multibeam echosounder systems. The course is aimed primarily at graduate students from the Geomatics program, but also at students from the Fisheries & Aquatic Sciences Program and the Department of Wildlife Ecology and Conservation that have an interest in the techniques used to map and image the seafloor.

Student Learning Objectives
A the end of this course, students will be able to:

1. *Explain* how sound propagates in water
2. *Describe* the use of ocean surveying and mapping instruments and data processing software
3. *Integrate* different sensors to build a proper ocean surveying system
4. *Select* the most appropriate suite of instruments and hydrographic standards for different purposes, including safe navigation
5. *Design* a hydrographic survey
6. *Interpret and analyze* written text

Instructional Methods
Course concepts will be introduced using real examples to demonstrate how marine geomatics is applied in the world. The course is entirely online, with asynchronous learning paired with synchronous discussion periods. This course has a lab component in which students will learn how to process bathymetric and backscatter data. The course provides opportunities for students to engage with other students and the instructor in various communication and interaction experiences.

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule (subject to change)

This syllabus represents current plans and objectives for this course. As the semester progresses, changes may need to be made to accommodate timing, logistics, or enhance learning. Such changes, communicated clearly, are not unusual and should be expected.

Weeks	Dates	Topics
1	July 3rd to July 9th	Course Introduction, Introduction to Remote Sensing for Ocean Mapping
2	July 10th to July 16th	Instruments and Platforms for Ocean Mapping
3	July 17th to July 23rd	Multisensor Integration, Positioning
4	July 24th to July 30th	Survey Design, Hydrographic Standards
5	July 31st to August 6th	Data Processing, Overview of Software and Surveying Systems
6	August 7th to August 11th	Data Products, Management, and Interpretation

Course Materials and Technology

Because of its online nature, this course requires access to a computer or mobile device with a high-speed internet connection, a headset and/or microphone and speakers, and the latest version of a web browser. Canvas supports only the two most recent versions of any given browser (What browser am I using?). A webcam is suggested for the live discussions.

The course will use a variety of software, including open-source software that can be downloaded on any desktop computer and laptop.

Technical support is available through the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- https://lss.at.ufl.edu/help.shtml

ACADEMIC REQUIREMENTS AND GRADING

Assignments and Exams

- Every week, students will be given a list of potential readings relevant to the weekly topics. Students will need to read the assigned documents and share discussion points on an online discussion forum. Students are also expected to interact with others in this forum. Students are expected to provide original and relevant contributions, and to contrast the readings with each other to achieve full marks. If more than one discussion is missed, each additional discussion missed will lead to a 7 points reduction in the point total. Discussions will be evaluated using a rubric.
- In lieu of a comprehensive final exam, six quizzes will be given to assess the students' understanding of each week's topics. The five highest grades of the six quizzes will be counted as part of the final grade.
- This course has a lab component during which the students will apply theoretical concepts in a practical GIS environment using real data. Six lab assignments will be graded, and the five highest grades of those assignments will count towards the final grade.

- All assignments will be submitted on the course website. Presentation of the assignments must be neat, logical, organized, and appropriately referenced. Poor presentation will be penalized up to a maximum of 20% of the value of assignments and exams.

Grading

Requirement	% of final grade
Online Discussion based on Readings (6x)	7% each (35%)
Quizzes (5 best of 6, all 6 must be taken)	3% each (15%)
Labs (5 best of 6, all 6 must be completed)	10% each (50%)

Points earned	93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	Below 60
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:
http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Late Policy
Due dates are indicated in the calendar above. Any modifications to these dates will be announced by the instructor when assignments are given. A deduction of 10% will be made for each day that an assignment is late, with the first 10% being removed immediately after the due time.

Policy Related to Make-up Exams, Other Work, and Required Class Attendance
It is the responsibility of the student to access on-line lectures, readings, quizzes, and exams and to maintain satisfactory progress in the course. Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Computer or other hardware failures, except failure of the UF e-Learning system, will not excuse students for missing assignments. Any late submissions due to technical issues MUST be accompanied by the ticket number received from the Helpdesk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request consideration. For computer, software compatibility, or access problems call the HELP DESK phone number—352-392-HELP = 352- 392-4357 (option 2).

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior
You are expected to actively engage in the course throughout the semester. You must come to the online discussions (live or not) prepared by completing all out-of-class assignments. This preparation gives you the knowledge or practice needed to engage in higher levels of learning during the live discussion sessions. If you are not prepared, you may struggle to keep pace with the activities occurring in the course, and it is unlikely that you will reach the higher learning goals of the course. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.

In order to facilitate the creation of a functional learning community and out of respect for the instructor and the other students, it is expected that all cell phones be either set on silent mode or turned off, except when authorized by the instructor. Please mute your microphone when not speaking. Recording devices are strictly prohibited. Students may not publish or share recordings without the written consent of the instructor.

Communication Courtesy and Professionalism
Just as in any professional environment, meaningful and constructive dialogue is expected in this class and requires a degree of mutual respect, willingness to listen, and tolerance of opposing points of view. Respect for individual differences and alternative viewpoints will be maintained in this class at all times. All members of the class are expected to follow rules of common courtesy, decency, and civility in all interactions. Failure to do so will not be tolerated and may result in loss of participation points and/or referral to the Dean of Students' Office.

Netiquette Guide for Online Courses
It is important to recognize that the online classroom is in fact a classroom, and certain behaviors are expected when you communicate with both your peers and your instructors. All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. Failure to do so may result in loss of participation points and/or referral to the Dean of Students' Office. These guidelines for online behavior and interaction are known as netiquette.

Remember that your password is the only thing protecting you from pranks or more serious harm.
- Don't share your password with anyone .
- Change your password if you think someone else might know it.
- Always log out when you are finished using the system.

When communicating online, you should always:
- Treat your instructor and classmates with respect in email or any other communication.
- Use clear and concise language.
- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms such as "wassup?" and texting abbreviations such as "u" instead of "you."
- Use standard fonts such as Ariel, Calibri or Times new Roman and use a size 10 or 12 pt. font.
- Avoid using the caps lock feature AS IT CAN BE INTERPRETTED AS YELLING.
- Limit and possibly avoid the use of emoticons.
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or sound offensive.

- Be careful with personal information (both yours and other's).
- Do not send confidential information via e-mail.

When you send an email to your instructor, teaching assistant, or classmates, you should:
- Use a descriptive subject line.
- Be brief.
- Avoid attachments unless you are sure your recipients can open them.
- Avoid HTML in favor of plain text.
- Sign your message with your name and return e-mail address.
- Think before you send the e-mail to more than one person. Does everyone really need to see your message?
- Be sure you REALLY want everyone to receive your response when you click, "reply all."
- Be sure that the message author intended for the information to be passed along before you click the "forward" button.

When posting on the Discussion Board in your online class, you should:
- Make posts that are on topic and within the scope of the course material.
- Take your posts seriously and review and edit your posts before sending.
- Be as brief as possible while still making a thorough comment.
- Always give proper credit when referencing or quoting another source.
- Be sure to read all messages in a thread before replying.
- Don't repeat someone else's post without adding something of your own to it.
- Avoid short, generic replies such as, "I agree." You should include why you agree or add to the previous point.
- Always be respectful of others' opinions even when they differ from your own.
- When you disagree with someone, you should express your differing opinion in a respectful, non-critical way.
- Do not make personal or insulting remarks.
- Be open-minded.

Opportunities for Input and Online Faculty Course Evaluation Process
Your comments are very valuable to the instructor. They will be used by the instructor to make specific improvements to the course (*e.g.*, assignments) and teaching style. The instructor will be providing opportunities throughout the semester for students to provide direct feedback on the course. However, students are encouraged to email the instructor at any time if they have concerns or comments to share with the instructor.

In addition, at approximately the mid-point of the semester, the School of Forest, Fisheries, and Geomatics Sciences might request anonymous feedback on student satisfaction on various aspects of this course. These surveys will be sent out through Canvas and are not required, but encouraged. This is not the UF Faculty Evaluation!

Finally, at the end of the semester, students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Academic Integrity
As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."*

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (*e.g.*, assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct or appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated.

Please remember that cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code. À

Inclusive Learning Environment
This course embraces the University of Florida's Non-Discrimination Policy, which reads,

> *The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act.*

If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see the instructor or refer to the Office of Multicultural & Diversity Affairs website: http://multicultural.ufl.edu.

Software Use
All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

SUPPORT SERVICES

Accommodations for Students with Disabilities
The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability-related issues. Students requesting classroom accommodation must first register with the Dean of Students Office within the first week of class. The Dean of

Students Office will provide documentation to the student who must then provide this documentation to the course instructor to receive accommodations. Please make sure you provide this letter to the instructor by the end of the second week of the course. The College is committed to providing reasonable accommodations to assist students in their coursework.

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Student Life, Wellness, and Counseling Help
Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- The Counseling and Wellness Center (352-392-1575) offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their website for more information: http://www.counseling.ufl.edu. Online and in-person assistance is available.
- U Matter We Care website: http://www.umatter.ufl.edu/. If you are feeling overwhelmed or stressed, you can reach out for help through the U Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the website at: https://shcc.ufl.edu/
- Crisis intervention is always available 24/7 from the Alachua County Crisis Center (352-264-6789) http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx
- Career Connections Center http://career.ufl.edu/
- Other resources are available at http://www.distance.ufl.edu/getting-help for online students.

Do not wait until you reach a crisis to come in and talk with us. You are not alone, so do not be afraid to ask for assistance.

Student Complaint Process
The School of Forest, Fisheries, and Geomatics Sciences cares about your experience, and we will make every effort to address course concerns. We request that all of our online students complete a course satisfaction survey each semester, which is a time for you to voice your thoughts on how your course is being delivered.

If you have a more urgent concern, your first point of contact should be the SFFGS Academic Coordinator or the Graduate/Undergraduate Coordinator for the program offering the course. You may also submit a complaint directly to UF administration: http://www.distance.ufl.edu/student-complaint-process.