EAS 4801 Syllabus

The Deep Ocean Mini-mester, 1 Credit hour

August 27 – September 24 2021, -W-F 9:30-10:45am
ES&T room L1118

Modality: hybrid

Instructor Information

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Email</th>
<th>Office Hours &amp; Meeting Link</th>
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<tbody>
<tr>
<td>Annalisa Bracco</td>
<td><a href="mailto:abracco@gatech.edu">abracco@gatech.edu</a></td>
<td>I can be reached by email any time. Virtual office hours: W-F 1:00-2:00pm</td>
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General Information

Description

“More than eighty percent of our ocean is unmapped, unobserved, and unexplored. Much remains to be learned from exploring the mysteries of the deep.” Jul 11, 2018, Ocean Service, NOAA (National Oceanic and Atmospheric Administration)

Pre- &/or Co-Requisites

None. Oceanography (EAS 4300) is useful but not mandatory.

Course Goals and Learning Outcomes

A Mini-Mester Course for undergraduate students interested in learning about challenges and opportunities in the mostly unexplored world that occupies 95% of our planet living space. We will dig into physical, biological and chemical discoveries as well as research, tools and technologies that are helping us exploring this frontier.

Course Modality Information

Synchronous Delivery with breakout sessions for discussion. All lectures will be recorded and posted after the class. Students will also need to complete specific course work asynchronously (few questions each week to test understanding of presented material)
Calendar

Week 1: Deep ocean circulation and climate variability: An Introduction. What we know, what we do not know, why it is important. Ocean drilling and paleo oceanography.

Week 2: Technologies for exploring the deep ocean, from the poles to the equator. The old, the new, the future.

Week 3: The mysterious world around hydrothermal vents. The life-in-other-planets analog.

Week 4: Biodiversity in the deep ocean. From the poles to the equator the adaptation strategies developed to live in the cold, high pressure and dark environment of the deep ocean are a celebration of evolution.

Week 5: The Gulf of Mexico: putting it all together, the tech, the physics, the chemistry and the biology.

During this course we will also have the opportunity to watch relevant episodes from the BBC documentary Blue Planet II

Course Requirements & Grading

Active participation in class (virtual and/or in person) and quizzes: 50%.

Note that you are expected to attend the class sessions (virtually or in-person) unless you have a compelling reason not to do so. I would appreciate if you can communicate with me when you cannot attend (virtually or in Person).

You are welcome to attend coming to class for in person delivery from week 2 onward, but in person attendance is not required. We have a room that will allow social distancing considering the number of enrolled students. Masks are mandatory.

I recommend coming to class for in person delivery whenever the material you are most interested in covering in your group project is discussed. Groups should be formed during week 1.

WEEK 1 DELIVERY is VIRTUAL ONLY

Group project: 50%
Description of Graded Group Project

This assignment taps into the creative side of the brain. The objective is to bring some aspect of the deep ocean and its exploration to life via a children’s story or an art piece. More to the point: this assignment pushes you to effectively communicate your message without jargon in an easy-to-access form or in an artistic way.

You will work in groups of 3 or 4 to develop a virtual storyboard targeted at readers between the ages of 5-10 or an art realization of your choice. The goal is to tell a compelling story to the reader where the message is clear and the narrative is easy to follow. There are no set topics for this assignment; just remember that this type of ‘book’ or art piece may serve as one of the few times children and/or adults are exposed to deep ocean-related topics, so consider carefully the message you want to send.

Grading Scale

Your final grade will be assigned as a letter grade according to the following scale:

- A 90-100%
- B 80-89%
- C 70-79%
- D 60-69%
- F 0-59%

According to policy, grades at Georgia Tech are interpreted as follows:

- A Excellent (4 quality points per credit hour)
- B Good (3 quality points per credit hour)
- C Satisfactory (2 quality points per credit hour)
- D Passing (1 quality point per credit hour)
- F Failure (0 quality points per credit hour)

See [http://registrar.gatech.edu/info/grading-system](http://registrar.gatech.edu/info/grading-system) for more information about the grading system at Georgia Tech.

Course Materials

Course Website and Other Classroom Management Tools

You will need to use Canvas
**Course Text**

There is no text book

**Additional Materials/Resources**

Support materials, like additional readings that interested and/or motivated students might want to read will be posted on Canvas.

**Course Expectations & Guidelines**

**Health-Related Considerations**

Effective July 15, 2020, University System of Georgia (USG) institutions require all faculty, staff, students, and visitors to wear an appropriate face covering while inside campus facilities/buildings where six feet social distancing may not always be possible. All members of the campus community will be provided reusable cloth face coverings.

Face covering use will be in addition to and is not a substitute for social distancing. Anyone not using a face covering when required will be asked to wear one or must leave the area. Refusal to comply with the requirement may result in discipline through the applicable conduct code for faculty, staff or students.

There are a few exemptions. Reasonable accommodations may also be made for those who are unable to wear a face covering for documented health reasons.

For more information about face masks and coverings, review the guidelines from Human Resources.

**Academic Integrity**

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit http://www.catalog.gatech.edu/policies/honor-code/ or http://www.catalog.gatech.edu/rules/18/.

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

**Collaboration & Group Work**

All kind of resources and tools can be used for your group project with adequate referencing.

**Accommodations for Students with Disabilities**

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or http://disabilityservices.gatech.edu/, as soon as possible, to make an appointment to discuss your special needs and to obtain an
accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

**Active Participation (instead of attendance)**

Because of the pandemic, I understand that flexibility in attendance is extremely important. In fact I will emphasize active participation in the course instead of attendance. Students are expected to attend the class sessions -virtually or in person - unless there is a compelling reason not to do so. But please isolate/quarantine in the event of exposure or positive test to COVID-19.

**Extensions, Late Assignments**

If you need extensions or cannot complete assignments email me.

**Student-Faculty Expectations Agreement**

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See this catalog page for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

**Digital Etiquette:** Please turn on cameras when attending or talking and mute your microphones while I am presenting.

**Campus Resources for Students**

The library, The Communication Center, CEISMC or The Center for Academic Success may all provide useful inputs for your project.
Resources for Students
In your time at Georgia Tech, you may find yourself in need of support. Below you will find some resources to support you both as a student and as a person.

Academic support
- Center for Academic Success [http://success.gatech.edu](http://success.gatech.edu)
  - 1-to-1 tutoring [http://success.gatech.edu/1-1-tutoring](http://success.gatech.edu/1-1-tutoring)
  - Peer-Led Undergraduate Study (PLUS) [http://success.gatech.edu/tutoring/plus](http://success.gatech.edu/tutoring/plus)
- OMED: Educational Services ([http://omed.gatech.edu/programs/academic-support](http://omed.gatech.edu/programs/academic-support))
  - Group study sessions and tutoring programs
- Communication Center ([http://www.communicationcenter.gatech.edu](http://www.communicationcenter.gatech.edu))
  - Individualized help with writing and multimedia projects
- Advising and Transition ([https://advising.gatech.edu](https://advising.gatech.edu))
  - Study Strategies Seminar course [https://advising.gatech.edu/gt2801-study-strategies-seminar](https://advising.gatech.edu/gt2801-study-strategies-seminar)
  - Academic coaching [https://advising.gatech.edu.academic-coaching](https://advising.gatech.edu.academic-coaching)
  - Advising in your major [http://advising.gatech.edu](http://advising.gatech.edu)

Personal Support
Georgia Tech Resources
- The Office of the Dean of Students: [https://studentlife.gatech.edu/content/get-help-now](https://studentlife.gatech.edu/content/get-help-now); 404-894-6367; Smithgall Student Services Building 2nd floor
- Center for Assessment, Referral and Education (CARE) 404-894-3498; [https://care.gatech.edu](https://care.gatech.edu)
  - Smithgall Student Services Building 1st floor
  - Students seeking assistance from the Counseling Center or Stamps Psychiatry need to visit CARE first for a primary assessment and referral to on and off campus mental health and well-being resources.
  - Students in crisis may walk in during business hours (8am-4pm, Monday through Friday) or contact the counselor on call after hours at 404-894-2575 or 404-894-3498. Other crisis resources: [https://counseling.gatech.edu/content/students-crisis](https://counseling.gatech.edu/content/students-crisis)
- Students’ Temporary Assistance and Resources (STAR): [https://studentlife.gatech.edu/content/star-services](https://studentlife.gatech.edu/content/star-services)
  - Can assist with interview clothing, food, and housing needs.
- Stamps Health Services: [https://health.gatech.edu](https://health.gatech.edu); 404-894-1420
  - Primary care, pharmacy, women’s health, psychiatry, immunization and allergy, health promotion, and nutrition
- OMED: Educational Services: [http://www.omed.gatech.edu](http://www.omed.gatech.edu)
- Women’s Resource Center: [http://www.womenscenter.gatech.edu](http://www.womenscenter.gatech.edu); 404-385-0230
- LGBTQIA Resource Center: [http://lgbtqia.gatech.edu](http://lgbtqia.gatech.edu); 404-385-2679
- Veteran’s Resource Center: [http://veterans.gatech.edu](http://veterans.gatech.edu); 404-385-2067
- Georgia Tech Police: 404-894-2500; [http://www.police.gatech.edu](http://www.police.gatech.edu)

National Resources
- The [National Suicide Prevention Lifeline](https://www.suicidepreventionlifeline.org) | 1-800-273-8255
  - Free and confidential support 24/7 to those in suicidal or emotional distress
- The [Trevor Project](https://www.trevorproject.org)
- Crisis intervention and suicide prevention support to members of the LGBTQ+ community and their friends
- Telephone | 1-866-488-7386 | 24 hours a day, 7 days a week
- Online chat | 24 hours a day, 7 days a week
- Text message | Text “START” to 687687 | 24hrs day, 7 days a week

**Statement of Intent for Inclusivity**

As a member of the Georgia Tech community, I am committed to creating a learning environment in which all of my students feel safe and included. Because we are individuals with varying needs, I am reliant on your feedback to achieve this goal. To that end, I invite you to enter into dialogue with me about the things I can stop, start, and continue doing to make my classroom an environment in which every student feels valued and can engage actively in our learning community.