Graduate Certificate Program:
Teaching and Communicating Ocean Sciences Broader Impacts
http://www.usf.edu/innovative-education/graduate-certificates/programs/teaching-communicating-ocean-sciences-broader-impacts.aspx

The Teaching and Communicating Ocean Sciences Broader Impacts Graduate Certificate program is intended to develop, practice and advance students skill set to lead broader impact activities and compete for competitive grant writing. Course activities will include practice in outdoor natural environments, labs and classrooms. Students will develop syllabi and practice teaching a component of an undergraduate STEM course and a pre-college STEM program. Successful completion of four certificate courses is required to fulfill this Certificate Program.

I.   OCE 6048 Ocean Scientists in the Classroom (taught Fall, even years)

Catalog Description- This course provides students with a theoretical framework, practical knowledge, and skills required to successfully design, implement, and evaluate effective science teaching and learning.

Course Objectives
1. To learn the general requirements for teaching science within a K-12 school (Science Standards for content and teaching)
2. To discuss the theoretical framework for how people learn science and how scientists practice science
3. To identify how K-12 students learn about the oceans within a classroom context
4. To develop a STEM-based ocean sciences module appropriate for K-12 or community science setting
5. To practice implementing an ocean sciences module, event or activity in a classroom, community event, social network

II.   OCE 6949C Developing and Teaching an Ocean Sciences STEM course (taught every Spring)

Catalog Description- This course is designed to enhance participants' science teaching and science communication skills. The course will provide students with the opportunity to develop the modules necessary to teach their first formal STEM Course.

Course Objectives
1. To learn STEM specific strategies and resources to teach an ocean sciences course at postsecondary level
2. To learn the general requirements for developing an ocean sciences course in the context of STEM education
3. To learn the basics of writing the content for a course, including syllabus, purpose, course content, objectives, student outcomes, schedule, grading policy
4. To develop an ocean sciences course that includes lab and field based components
5. To practice implementing a module of an ocean sciences course as a guest for an existing course

III.   OCE 6940C Experiential Learning in Marine Sciences (taught every Summer)

Catalog Description- This course demonstrates marine science teaching protocols via the examination of marine science concepts and inquiry-based learning strategies through team building, lab-based research experiences, and field explorations to local marine environments.

Course Objectives
1. To learn the theoretical framework for experiential learning in the context of STEM and ocean sciences education
2. To learn how to teach ocean sciences content from a natural setting in a marine environment
3. To develop an understanding of the challenges and benefits of field-based experiential learning
4. To design a field-based ocean sciences module, event or activity
5. To implement a field-based ocean sciences module, event or activity for precollege or postsecondary students

IV.   OCE 6950 Teaching the Broader Impacts of Ocean Sciences (taught Fall, odd years)

Catalog Description- This experiential learning course is designed to teach graduate students how to prepare research grants, develop lab, field-based, and in classroom lesson modules to effectively translate science concepts to their students.

Course Objectives
1. To learn the broader impacts requirements of federal and state agencies in the context of STEM research and education
2. To learn the basics of writing a broader impact statement for STEM-based research grants
3. To learn how to design a STEM-based ocean sciences broader impacts program, event, activity
4. To practice implementing a component of a STEM-based ocean sciences broader impacts program, event, activity as part of an existing Precollege or outreach program

V.   It may be possible to substitute the OCE 6950 Teaching the Broader Impacts of Ocean Sciences with the Professional Development I course (taught every Fall)

Details about Certificate Program

Teaching and Communicating Ocean Sciences Broader Impacts

Course location/delivery: The Certificate is offered at the St Petersburg campus and partially online.

Admission requirements: Applicants for the Certificate should have:
- A bachelor's degree or equivalent from a regionally accredited university or college.
- A minimum GPA of 3.0 on all work completed while registered as an upper-division baccalaureate student

Prerequisites: None are required.

Requirements: Total of 12 credit hours for the certificate.
- OCE 6940C – Experimental Learning in Marine Science (3)
- OCE 6048 – Scientist in the Classroom (3)
- OCE 6950 – Teaching Broader Impacts of Ocean Sciences (3)
- OCE 6949C – Developing and Teaching a STEM Course (3)

Electives: n/a

Time limit: Five years

Credit toward graduate degree: Up to 12 hours of certificate course credits may be applied to a graduate degree with departmental approval.

Standardized tests: International students must submit a TOEFL score when English is not the native language. A minimum score of 550 on the paper-based test or 79 on the web-based test is required.

Contacts
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Graduate Certificates
813-974-4926
send email

Department Website

Application Process

Thank you for your interest in USF Graduate Certificates. Your completed application is due to the Graduate Certificate office at least two weeks before the start of the semester for which you are applying. Deadlines are as follows:

Summer Start – April 27   Fall Start – Aug. 10   Spring Start – Dec. 14

Alternative calendar certificates have different application deadlines. Visit the individual programs for dates.

Prior to starting the application process, please note:
- Some certificates require additional materials. Please read the specific certificate program page to see if any additional application materials are required.
- International students will need to provide additional documentation.
- If you are applying to multiple Graduate Certificate programs, please apply for each one separately.
- Admission to a graduate certificate program does not imply automatic acceptance into a graduate degree program.

To complete the application process, follow the steps below.

Existing USF Graduate Students Applying to a Certificate Program

To apply for admission to your Graduate Certificate program, you must:
- Complete the online application for admission.
- Submit the following documents:
  - Letter of interest
  - Resume

Existing USF Graduate Students are not required to pay $30 application fee or submit transcripts.

New USF Students Applying to a Certificate Program

To apply for admission to USF, you must:
- Complete the online application for admission.
- Pay the non-refundable $30 application fee.
- Upload the following documents:
  - Letter of interest
  - Resume
  - Unofficial transcripts from each college or university you attended, to include military credits and CLEP scores.
- Mail official transcripts to:
  - University of South Florida Graduate Certificates USF Innovative Education 4202 E. Fowler Ave., SVC 1072 Tampa, FL 33620

Submit Other Required Documents to USF

If you wish to take classes on campus, you must:
- Submit the Immunization Health History Form to the Immunization office prior to registration. If this is not done, a hold will be placed on your account.
- For additional information, please review the Student Insurance page, or call 813-974-5407 or e-mail: insurance@shs.usf.edu.

Application process- To learn about the application process, and to access the application, please review our **application process.**