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 syllab

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 a 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 communication skills. The course will provide students with the opportunity to develop the resources 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, place-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

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 undergraduate or post-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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Course