

# **NEW EDUCATIONAL PROGRAM**

## **CERTIFICATE PROGRAM**

### ***APPLIED CARBONATE GEOLOGY***

CSL – Center for Carbonate Research  
Department of Marine Geosciences

#### **PURPOSE AND GOALS OF THE CERTIFICATE PROGRAM**

To advance knowledge and understanding in carbonate systems by providing students and geoscientists with a comprehensive education in carbonate geology, geophysics, and geochemistry and thereby transforming them into experts in carbonates. The certificate program is designed for working professionals who want a specialization in this field. The goal is to provide first-rate continuing education to professionals or geology students who want to become specialists in carbonate geology.

#### **OVERVIEW AND COSTS**

The Certificate Program will start in January 2016. A successful completion of the program will require 16 course credits to be taken during the Spring Semester and 1st Summer Session. There are ten electable 2- or 3-credit courses in the program (see below). The current tuition fee is \$1790/credit.

The student/geoscientist will be in residence for 6 months. They will not write a thesis but the courses are structured in a way that classroom knowledge is directly used in subsequent laboratory classes and projects.

#### **REQUIREMENTS FOR ADMISSION AND REGISTRATION**

A bachelor degree or equivalent degree is required for attendance. This requirement can be offset by years of working experience. No GRE or TOEFL are required, yet common knowledge of English is required.

Registration for the Certificate Program will start in the summer of 2015 and will be handled by the Graduate Studies Office of RSMAS.

#### **MISSION AND LEARNING OUTCOMES**

##### **Mission:**

*"To advance students' knowledge and understanding of the physical, chemical, and dynamic processes that form carbonates. Certificate graduates will have acquired specialty knowledge in carbonate geology that can be applied to societal needs."*

**Learning Outcome 1:** Students will gain a broad knowledge of carbonate geology and an awareness of scientific research in their subject areas.

**Learning Outcome 2:** Students will learn how to incorporate acquired knowledge and available data and tools into the workflow of applied projects.

**Learning Outcome 3:** Students will learn oral and written communication skills, and will be able to effectively communicate and defend their ideas and findings to peers, managers, and administrators.

### **INSTRUCTORS IN THE CERTIFICATE PROGRAM**

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The instructors of the courses in the Certificate Program are all part of the CSL - Center for Carbonate Research. Courses are taught either by individuals or by a pair of faculty and scientists.

<i>Faculty Member</i>	<i>Field</i>	<i>Rank</i>
Peter K. Swart	Carbonate Geochemistry	Professor
Gregor P. Eberli	Seismic Sequence Stratigraphy	Professor
James S. Klaus	Paleoecology, Geomicrobiology	Ass. Professor
Donald F. McNeill	Sedimentology, Stratigraphy	Scientist
Mara R. Diaz	Molecular and Geomicrobiology	Ass. Scientist
Greta Mackenzie	Petrography	Ass. Scientist
Ralf J. Weger	Petrophysics	Ass. Scientist

### **OFFERED COURSES IN THE CERTIFICATE PROGRAM**

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MGS 511	3 Cr	Earth Surface Systems
MGS 541	2 Cr	Field Evaluation of Fossil Platforms, Margins, and Basins
MGS 601	1 Cr	Seminar in MGS
MGS 681	2 Cr	Field Seminar: Facies Successions on Great Bahama Bank
MGS 682	2 Cr	Field Seminar: Heterogeneity of a Windward Margin
MGS 683	2 Cr	Seismic Interpretation of Carbonate Systems
MGS 685	2 Cr	Petrophysics of Carbonates
MGS 686	2 Cr	Microbial Carbonates
MGS 687	2 Cr	Carbonate Diagenesis and Petrography
MGS 688	2 Cr	Carbonate Depositional Systems: Subsurface Analysis in Cores

The syllabus of each course will be posted on the CSL and RSMAS websites. The two field seminar courses are identical to our annual Bahamas field seminar that we offer every year; they are described in the next pages. The courses 681-688 are taught in blocks, enabling attendance for a single topic. The exact dates of the courses will be posted in the fall of 2015.