

# RIVER-COASTAL SCIENCE AND ENGINEERING CERTIFICATE (GRADUATE)

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## Overview

Tulane University and the U.S. Army Engineer Corps of Engineers have partnered to provide a unique, graduate-level certificate program that focuses on teaching students both the science and engineering associated with river management. There is an emphasis on the academic underpinnings as well as pragmatic applications, and the interdisciplinary nature of rivers is stressed by including faculty who work in geology, civil engineering, geomorphology, river mechanics and engineering, biogeochemistry, ecology and numerical modeling. This program is offered fully online, combining self-taught modules with weekly Live Sessions and is available to students everywhere. This certificate program can, but does not have to, serve as a step toward a graduate degree in the subject.

## Requirements

The River-Coastal Science and Engineering Certificate program will consist of the completion of one required course, RCSE 6800 Intro to River Science & Eng (3 c.h.), or RCSE 6802 Introduction to Coastal Science and Engineering (3 c.h.) with at least four additional advanced courses listed below. The existing coursework in the program is:

Course ID	Title	Credits
RCSE 6010	Water Resources Engineering II (offered Fall semester, odd years)	3
RCSE 6030	Water Resources Engineering III (offered Spring semester, even years)	3
RCSE 6040	Coastal Marine Geology (offered Fall semester, odd years)	3
RCSE 6660	Special Topics (Offered periodically)	1-3
RCSE 6710	Open Channel Flow (offered Spring semester, odd years)	3
RCSE 6800	Intro to River Science & Eng (offered every Spring semester)	3
RCSE 6802	Introduction to Coastal Science and Engineering (offered every Fall semester)	3
RCSE 6810	River and Stream Restoration (offered Spring semester, even years)	3
RCSE 6820	Introduction to River-Coastal Hydrologic and Hydraulic Modeling (offered Spring semester, even years)	3
RCSE 6830	River Mechanics & Management (offered Fall semester, even years)	3
RCSE 6840	Methods in River Sampling (offered Spring semester, odd years)	3
RCSE 6850	Estuarine Processes (offered Spring semester, odd years)	3
RCSE 6860	Environmental Data Analysis in the Anthropocene (offered Spring semester, even years)	3
RCSE 6865	Sea Level Rise (offered Spring semester, odd years)	3
RCSE 6870	Hydroclimatology (offered Fall semester, odd years)	3
RCSE 6875	Ecohydrology (offered Fall, even years)	3
RCSE 7100	Seminar in River Coastal Science and Engineering (Every semester)	1
RCSE 6900	Independent Study (Every semester)	1-3

Students should complete the Intro courses prior to enrolling in advanced courses unless permission is obtained from the River Science and Engineering Certificate program coordinator, Barb Kleiss ([bkleiss@tulane.edu](mailto:bkleiss@tulane.edu)) ([meadallison@tulane.edu](mailto:meadallison@tulane.edu)) and the class instructor. This exception will be made for students who are not initially interested in completing the full certificate program and that also meet the instructor's prerequisites for entrance into the course. Each of the courses in the program will be three credit hours. Those completing 15 credit hours of required coursework will be granted a Graduate Certificate from Tulane. All courses will be taught on the standard Tulane Fall and Spring semester schedule.