

Online Coastal Engineering Certificate Program (CECP) and MS Degree Program

Department of Civil and Environmental Engineering

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What is the ODU Online Coastal Engineering Certificate Program (CECP)?

A series of four (4) graduate level courses in the specialty area of Coastal Engineering within Civil Engineering. All are offered online over the Internet, in synchronous (Visual Streaming) mode, over a two-year period (spring, fall semesters). The Certificate is earned after successful completion of the four courses from the Civil and Environmental Engineering Department, Old Dominion University (ODU) Norfolk, Virginia, USA. The Cumulative Grade Point Average (GPA) of the four courses must be a minimum of a B average (3.0) to earn the Certificate.

What's the purpose?

The purpose of the CECP is to provide practicing engineers the opportunity to study Coastal Engineering at the graduate level to help them in the practice of their engineering profession. The Certificate demonstrates a basic level of understanding of the physical sciences, engineering, economics, the environment, and the institutional-political-social and aesthetic constraints that influence all coastal engineering design. The Certificate may also provide the necessary credentials for continuing education by state licensing boards and professional organizations.

What are the academic requirements?

An undergraduate degree from an accredited university in Engineering (Civil, Environmental, Ocean etc.) or the Oceanographic sciences (Oceanography, Geology, etc.) is preferred. Experienced professionals in the Coastal Engineering field may also register.

Graduate students at other universities may also take these courses but must first determine credit transfer possibilities at their university.

How long will it take to earn the Coastal Engineering Certificate?

The Coastal Engineering Certificate can be earned in two years or less if you can take two courses in a semester. If starting this Fall 2018 semester, you can be finished by the end of the Spring 2020 semester or earlier. All courses are relatively self-contained so that you can begin at any semester or miss a semester and pick up the missing course(s) when offered again. 3 out of 4 CECP courses are offered at least once a year.

Who is the instructor/professor that teaches the courses?

The CECP courses are taught by Dr. Gangfeng Ma and Dr. Navid Tahvildari, faculty members of Civil and Environmental Engineering department. If you have any further questions after reviewing all the above questions, answers, and links to additional information, please feel free to contact Dr. Ma at gma@odu.edu.

What are the four courses offered?

All are regularly scheduled, online graduate courses (all 3 credits) in the Master and Ph.D. programs at ODU:

CEE 582 Introduction to Coastal Engineering

Text is Introduction to Coastal Engineering and Management, Kamphuis, 2010 World Scientific
(Scheduled for every SPRING semesters)

CEE782 Design of Coastal Structures

Texts are (a) Introduction to Coastal Engineering and Management, Kamphuis, 2010 World Scientific,
(b) The Coastal Engineering Manual, US Army Corps of Engineers, 2000 (Scheduled for every FALL semester)

CEE 787 Dredging and Beach Engineering

Text is Beach Nourishment, Theory and Practice, Dean, 2002 World Scientific Publishing Company.
(<http://www.worldscientific.com>). Additional materials on dredging and shoaling estimates for navigation channels and tidal inlets covered in this course
(Scheduled for SPRING odd year (e.g. 2019, 2021...) with two-year cycle)

CEE 788 Coastal Hydrodynamics and Sediment Processes

Texts are Coastal Processes with Engineering Applications, Dean and Dalrymple, 2002 Cambridge University Press.
(Scheduled for every FALL semester)

How to register and access a course?

Students are enrolled as **Non-Degree Graduate Students**. This simply means you are not presently interested in seeking a graduate degree (MS or PhD), and do not need to formally apply and be admitted to the Graduate School meeting all eligibility criteria. However, all four courses taken in a non-degree status, may be applied to the graduate degree (MS in Civil Engineering) at a later date, if you are interested, apply, and are admitted as a **Degree-Seeking Student**.

Once registered, you will be provided with an ODU Student E-Mail Account to access the video stream for your class. Go to the ODU Student E-Mail web page for more information. This Student E-Mail Account is also needed to access the Blackboard course system that will be used for homework submittals and all communication needs in each class.

Contact

For further information, visit CECP website
<https://www.odu.edu/eng/research/institutes-labs/cei/coastal-engineering-certificate-program-cecp>
Or contact Graduate Program Director CEGPD@odu.edu
or CECP Director Dr. Gangfeng Ma at gma@odu.edu

(Updated: November 13, 2019)

**Online MS Degree in Civil Engineering
(concentration in Coastal Engineering) at
Old Dominion University**

Master of Science (MS) in Civil Engineering

Coastal Engineering is one of five (coastal, geotechnical, hydraulic and water resources, structural, and transportation) focus areas in Civil Engineering for specialization to obtain the Master of Science (MS) degree at ODU. ODU offers MS degree in three options; Thesis Option, Project Option and Course Option. Potential students must apply for and be admitted to the Graduate School.

Requirements for Admission

Regular admission requirements include a (1) bachelor's degree in engineering, (2) 3.00 grade point average (4.00 scale) for regular admission, (3) 500 word (or less) essay on academic and personal goals, and (4) two letters of recommendation from current or former professors or supervisors. Applicants with an undergraduate degree in the physical sciences (oceanography, geology, etc.) are also welcome. They are required to demonstrate adequate knowledge in engineering mechanics (statics, dynamics, fluid mechanics, soil mechanics, strength of materials, etc.) at the undergraduate level.

Applicants with non-engineering BS degree and from foreign countries must also submit Graduate Record Examination (GRE) scores. The English proficiency requirement for non- native speakers of English can be met through TOEFL scores or possession of the BS degree from a country where English is the native language. TOEFL scores may be waived if applicants would have successfully completed CECP courses and approval of course instructors. Final approval for admittance is the responsibility of the Office of Admissions.

Apply early since the application process spans six to eight weeks. Delays are due to missing required documents. Apply online at www.admission.odu.edu.

**Master of Science (MS) in Civil
Engineering Degree**

CEE department offers MS degree in three options; **Thesis Option**, **Project Option** and **Course Option**. All requires total 30 credit hours. Course requirement in those options with Coastal Engineering Certificate courses are shown in Table below.

M.S. Thesis Option	Crd. Hrs.	M.S. Project Option	Crd. Hrs.	M.S. Course Option	Crd. Hrs.
CEE 782 CEE 787 CEE 788 CEE xxx	12	CEE 782 CEE 787 CEE 788 CEE xxx	12	CEE 782 CEE 787 CEE 788 CEE xxx	12
		CEE xxx	3	CEE xxx CEE xxx	6
CEE 582 CEE yyy CEE yyy	9	CEE 582 CEE yyy CEE yyy	9	CEE 582 CEE yyy CEE yyy	9
MATH or STAT	3	MATH or STAT	3	MATH or STAT	3
Thesis	6	Project	3	Comprehensive exam.	
Total Crd. Hrs.	30**	Total Crd. Hrs.	30**	Total Crd. Hrs.	30

** Note: For Thesis and Project options, no more than 9 credit hours can be at 500 level.

In the table above, CEE xxx shall be upper level civil engineering courses and CEE yyy could be any level of graduate courses, including other related discipline courses. Those courses shall be pre-approved by the Advisor and Graduate Program Director. Thus, Thesis Option requires total 24 credits of courses, Project Option, 27 course credits and Course Option 30 course credits, all including one graduate MATH/STAT course (3 credits).

**Transfer of Graduate Level Courses
from Other Universities (12 credits)**

ODU University policy allows the transfer of up to 12 credit hours (4 courses) from other universities (with grades B or better) for the graduate degree programs. Together with the 12 credit hours of online coastal engineering certificate required courses from ODU, this totals 24 transferable credits (8 courses) toward MS degree. Courses appearing on transcripts from other Universities and counted for degrees from other Universities are not acceptable for transfer to ODU for MS degree.

Coastal Engineering is a broad discipline. Graduate level courses in mathematics, statistics, physical oceanography, coastal geology, coastal zone management, etc. are generally accepted towards the MS degree. Program required courses should be consulted to determine the course content for comparison with similar courses at other universities for transfer consideration. These courses may be taken on site at a University in your region or by distance learning from another University, as applicable. Pre-approval for potential transfer courses is required by the advisor and the Graduate Program Director of CEE Department at ODU.

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OLD DOMINION UNIVERSITY

Frank Batten College of Engineering and Technology