Certificate

Advanced Engineering with a Concentration in Cyber Systems Security Certificate

The certificate program aims to provide a thorough understanding the cyber security threats faced by the stand-alone computer systems, networked systems, IT infrastructure, and cyber physical systems having embedded computer systems operated by individuals, small businesses and large enterprises along with the knowledge required to defend against these threats. The course will enable participants to learn state of the art techniques necessary for analyzing cyber security risks, preventing, detecting and recovering from cyber attacks through class room instructions and hands-on lab work. The program uniquely accommodates students from engineering, math and sciences as well as practicing engineers and managers. The course will make use of ODU's multidisciplinary strengths in the fields of Cyber Systems, Computer Engineering, Software Engineering and Modeling and Simulation. This program is designed both as a complement for students working on graduate degrees and for those personnel working on information and cyber systems used in industry, small businesses, healthcare, government, military and home land security. It is anticipated that students will complete the program in 2 semesters (full time enrollment) or 2 years (part-time enrollment or working to complement an existing graduate program).

Certificate Program Admission Requirements

All applicants admitted to the certificate program must have earned a baccalaureate degree in engineering, mathematics, science, or a related STEM field from a regionally-accredited institution or an equivalent degree from a foreign institution.

Certificate Program Curriculum Requirements

The Graduate Certificate in Cyber Security requires completion of 12 credit hours of graduate course work, consisting of two core courses and two elective courses from the course list below.

Required Core Courses		
MSIM 570	Foundations of Cyber Security	3
MSIM/ENMA 670	Cyber Systems Engineering	3
Electives		
Select two of the following:		6
ECE 516	Cyber Defense Fundamentals	
ECE 519	Cyber Physical System Security	
MSIM 673	Threat Modeling and Risk Analysis	
Total Credit Hours		**12**