

COMMAND, CONTROL, COMMUNICATIONS, COMPUTING, AND INTELLIGENCE GRADUATE CERTIFICATE

Banner Code: VS-CERG-C4I

Academic Advising

2100 Nguyen Engineering Building
Fairfax Campus

Phone: 703-993-1670

Email: seor@gmu.edu

Website: <http://seor.gmu.edu/msse/cert-c4i.html>

C4I systems are concerned with gathering, retrieving, analyzing, and disseminating time-sensitive information to achieve mission-critical objectives. These systems support military operations across the spectrum of conflict, intelligence operations, transportation monitoring, emergency response, drug interdiction, and law enforcement, among others. C4I systems include the equipment, people, and procedures necessary to accomplish the mission. The equipment may include a variety of sensors, communications systems, and information processing and decision-support systems.

The C4I certificate focuses on the analysis, design, development, and management of C4I systems. Topics addressed include C4I architectures and software, communications, decision support, modeling and simulation, and sensor data fusion.

The graduate certificate may only be pursued on a part-time basis.

Admissions & Policies

Admissions

The certificate is available to students who hold bachelor's degrees in engineering and scientific disciplines or are in graduate status in such programs. Admission requirements are identical to those for the Systems Engineering, MS.

Policies

For policies governing all graduate certificates, see AP.6.8 Requirements for Graduate Certificates.

Requirements

Certificate Requirements

Total credits: 12

The certificate requires 12 credits (4 courses). Students must complete the following with an average grade of B or better:

Required Courses

SYST 680	Principles of Command, Control, Communications, Computing, and Intelligence (C4I)	3
or ECE 670	Principles of C4I	
OR 542	Operations Research: Stochastic Models	3

or ECE 528	Introduction to Random Processes in Electrical and Computer Engineering	
Select two from the following:		6
SYST 584	Heterogeneous Data Fusion	
SYST 664	Bayesian Inference and Decision Theory	
SYST 683	Modeling, Simulation, and Gaming	
OR 635	Discrete System Simulation	
ECE 542	Computer Network Architectures and Protocols	
ECE 630	Statistical Communication Theory	
ECE 642	Design and Analysis of Computer Communication Networks	
Total Credits		12

Completing the C4I Certificate within the Systems Engineering Master's Program

In addition to the four certificate courses above, students must complete the following six courses:

SYST 505	Systems Engineering Principles	3
SYST 510	Systems Definition and Cost Modeling	3
SYST 520	System Engineering Design	3
SYST 530	Systems Engineering Management I	3
SYST 611	System Methodology and Modeling	3
SYST 699	Masters Project	3
Total Credits		18