

# SYSTEMS ENGINEERING CERTIFICATE

The graduate certificate in Systems Engineering is a convenient program for engineers desiring to acquire the fundamentals of Systems Engineering without the commitment to a full degree program.

Upon completion of the certificate program, the student may apply to the M.S. program in Systems Engineering and have the courses completed for the certificate to be credited towards the M.S. degree.

## Admission Requirements

- B.S. degree or higher in any engineering discipline, computer science, physics or consent of the Graduate Director
- Two years' work experience is preferred

## Graduation Requirements

Completion of three of the following core Systems Engineering courses (9 semester hours) with a 2.7 grade point average or higher:

Code	Title	Semester Hours
Select three of the following:		9
SYEG 500	Systems Engineering	
SYEG 540	Systems Thinking: Major Tech Changes/Impacts	
SYEG 600	Advanced Systems Engineering and Program Management	
SYEG 640	Model Based Systems Engineering	
SYEG 650	Systems Architecture	
SYEG 668	Systems Engineering Modeling and Analysis	
Selected courses from the technical focus areas:		
SYEG 551		
SYEG 554	Engineering for Autonomy	
SYEG 557	Agile Development and Project Management	
SYEG 562		
SYEG 570	Spacecraft Design	
SYEG 572	Spacecraft Communications and Radar	
SYEG 584	Occupy Mars: Explorations in Space Travel and Colonization	
SYEG 586	Launch Vehicle Technology and Design Evolution	
SYEG 587	Resilient Space Systems Design	
SYEG 588	Satellite Guidance, Control, and Operations	
Special of independent studies:		
SYEG 662	Secure Software Development	
SYEG 598	Special Studies	
SYEG 599	Independent Studies	
SYEG 698	Special Studies	
SYEG 699	Independent Studies	
<b>Total Semester Hours</b>		<b>9</b>

Selected courses from the technical focus areas:

Code	Title	Semester Hours
SYEG 551		3
SYEG 554	Engineering for Autonomy	3
SYEG 557	Agile Development and Project Management	3
SYEG 562		3
SYEG 570	Spacecraft Design	3
SYEG 572	Spacecraft Communications and Radar	3
SYEG 584	Occupy Mars: Explorations in Space Travel and Colonization	3
SYEG 586	Launch Vehicle Technology and Design Evolution	3

### Completion of:

- SYEG 699 Independent Studies