MASTER OF SCIENCE IN SYSTEMS ENGINEERING

Plan B
Effective Fall 2024

Code	Title	Credits
Core Requirements		
Select 5 courses from the following:		15
ECE 566	Grid Integration of Wind Energy Systems	
ENGR 502	Engineering Project and Program Management	
or CIS 600A	Project Management: Information Technology	
or CIS 670	Advanced IT Project Management	
ENGR 510	Engineering Optimization: Method/Application	
ENGR 520	Engineering Decision Support/Expert Systems	
ENGR 525	Intellectual Property and Invention Systems	
ENGR 531	Engineering Risk Analysis	
ENGR 533	Spaceflight and Biological Systems	
ENGR 535	Modeling Human Systems Behavior	
ENGR 540	Design Analysis of Engineering Experiments	
ENGR 565/ ECE 565	Electrical Power Engineering	
ENGR 570	Coupled Electromechanical Systems	
MECH 513	Simulation Modeling and Experimentation	
SYSE 501	Foundations of Systems Engineering	
SYSE 505	Systems Thinking for the Real World	
SYSE 512	Systems Sensing and Imaging Analysis	
SYSE 530	Overview of Systems Engineering Processes	
SYSE 532/ ECE 532	Dynamics of Complex Engineering Systems	
SYSE 534	Human Systems Integration	
SYSE 541	Engineering Data Design and Visualization	
SYSE 544	Systems-Based AR/VR Environmental Realism	
SYSE 545	Augmented/Virtual Reality Systems Development	
SYSE 548	Security Engineering for Systems Engineers	
SYSE 549	Secure Vehicle and Industrial Networking	
SYSE 567	Systems Engineering Architecture	
SYSE 569	Cybersecurity Awareness for Systems Engineers	
SYSE 571	Analytics in Systems Engineering	
SYSE 573	Cost Optimization for Systems Engineers	
SYSE 602	Systems Requirements Engineering	
SYSE 603	Introduction to Systems Test and Evaluation	
SYSE 667	Advanced Model-Based Systems Engineering	
Technical Electives [1]		**12**
Research		
SYSE 695	Independent Study [2]	3
Program Total Credits:		**30**

A minimum of 30 credits are required to complete this program.

[1] Select 6 credits with approval by student's advisory committee. A maximum of 6 credit hours are permitted at the 400-level. The remainder must be at the 500-level or above.

[2] Complete SYSE 695 or select a comparable course with a minimum of 3 credits with approval of graduate advisor.