DOCTOR OF ENGINEERING IN SYSTEMS ENGINEERING

The Doctor of Engineering in Systems Engineering degree is intended for working professionals and includes core studies in complex systems engineering and its applications to complex systems in a working environment. Curriculum includes professional and applied/translational courses, a systems engineering practicum, and a dissertation to assist working professionals attain a higher level of value to their organizations.

Requirements Effective Fall 2020

Code	Title	Credits
Required Courses: [1]		
ENGR 502	Engineering Project and Program Management	3
or CIS 600A	Project Management: Information Technology	
or CIS 670	Advanced IT Project Management	
ENGR 531	Engineering Risk Analysis	3
SYSE 501	Foundations of Systems Engineering	3
SYSE 530	Overview of Systems Engineering Processes	3
Applied Required Course:		
SYSE 786	Applied Systems Engineering Practicum	9
Professional Required Course:		
SYSE 710	Leadership/Innovation in Systems Engineering	3
Technical Electives – Select 3 credits from the following: [2]		**3**
ENGR 510	Engineering Optimization: Method/ Application	
ENGR 520	Engineering Decision Support/Expert Systems	
ENGR 570	Coupled Electromechanical Systems	
MECH 513	Simulation Modeling and Experimentation	
SYSE 532/ ECE 532	Dynamics of Complex Engineering Systems	
SYSE 567	Systems Engineering Architecture	
SYSE 569	Cybersecurity Awareness for Systems Engineers	
SYSE 571	Analytics in Systems Engineering	
SYSE 602	Systems Requirements Engineering	
SYSE 603	Introduction to Systems Test and Evaluation	
SYSE 667	Advanced Model-Based Systems Engineering	
Applied Electives – Select 3 credits from the following:		**3**
BUS 500	Foundations for Business Impact	
BUS 601	Quantitative Business Analysis	
CIS 570	Business Intelligence	
CIS 575	Applied Data Mining and Analytics in Business	
Professional Electives – Select 3 credits from the following:		**3**
BUS 620	Leadership and Teams	
BUS 630	Information Management	
CIS 676	Information Technology Management	
PSY 647	Applied Industrial Psychology	
PSY 648	Applied Organizational Psychology	
SYSE 711	Ethics in Systems Engineering	
Research and Dissertation		
SYSE 799B	Dissertation: Professional Doctorate	9
Additional credits required to complete this degree:		**30**
Applicable Master's Degree Credit (a maximum of 30 credits may be accepted from a master's degree)		
Technical courses as advised (500-level or higher)		
Program Total Credits:		**72**

1. If required courses or the equivalent have not been taken, they must be taken prior to any other technical elective.
2. Other courses may be selected with advisor approval.

A minimum of 72 credits are required to complete this program.