MASTER OF ENGINEERING, PLAN C, COMPUTER ENGINEERING SPECIALIZATION

Requirements
Effective Fall 2024

Code	Title	Credits
Regular Coursework [1, 2, 3]		**30**
CS 4XX	Any CS course at the 400-level (excluding courses numbered 482-499)	
CS 5XX	Any CS course at the 500-level (excluding courses numbered 582-599)	
CS 6XX	Any CS course at the 600-level (excluding courses numbered 682-699)	
ECE 4XX	Any ECE course at the 400-level (excluding courses numbered 482-499)	
ECE 5XX	Any ECE course at the 500-level (excluding courses numbered 582-599)	
ECE 6XX	Any ECE course at the 600-level (excluding courses numbered 682-699)	
MATH 4XX	Any MATH course at the 400-level (excluding courses numbered 482-499)	
MATH 5XX	Any MATH course at the 500-level (excluding courses numbered 582-599)	
MATH 6XX	Any MATH course at the 600-level (excluding courses numbered 682-699)	
PH 4XX	Any PH course at the 400-level (excluding courses numbered 482-499)	
PH 5XX	Any PH course at the 500-level (excluding courses numbered 582-599)	
PH 6XX	Any PH course at the 600-level (excluding courses numbered 682-699)	
BIOM 533/ CIVE 533	Biomolecular Tools for Engineers	
ENGR 510	Engineering Optimization: Method/ Application	
ENGR 520	Engineering Decision Support/Expert Systems	
ENGR 531	Engineering Risk Analysis	
ENGR 533	Spaceflight and Biological Systems	
ENGR 665	Stochastic Simulation in Engr Applications	
GRAD 510	Fundamentals of High Performance Computing	
GRAD 530	Introduction to Graduate Research	
GRAD 544	Ethical Conduct of Research	
GRAD 550	STEM Communication	
MATH 550/ ENGR 550	Numerical Methods in Science and Engineering	
MATH 569A	Linear Algebra for Data Science: Matrices and Vectors Spaces	
MATH 569B	Linear Algebra for Data Science: Geometric Techniques for Data Reduction	
MATH 569C	Linear Algebra for Data Science: Matrix Factorizations and Transformations	
MATH 569D	Linear Algebra for Data Science: Theoretical Foundations	
MECH 502	Advanced/Additive Manufacturing Engineering	
MECH 513	Simulation Modeling and Experimentation	
MECH 524	Principles of Dynamics	
MECH 529	Advanced Mechanical Systems	
MECH 531/ BIOM 531	Materials Engineering	
MECH 564	Fundamentals of Robot Mechanics and Controls	
MECH 570/ BIOM 570	Bioengineering	
MECH 575	Solar and Alternative Energies	
MECH 630	Biologically Inspired Robotics	
NSCI 575/ GRAD 575	Ethical Issues in Big Data Research	
STAA 561	Probability with Applications	
SYSE 501	Foundations of Systems Engineering	
SYSE 530	Overview of Systems Engineering Processes	
SYSE 532/ ECE 532	Dynamics of Complex Engineering Systems	
SYSE 536	Space Mission Analysis and Design	
SYSE 541	Engineering Data Design and Visualization	
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 711	Ethics in Systems Engineering	
Program Total Credits:		**30**

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

1. Courses not accepted as regular include all courses ending in the range -82 through -99.
2. A maximum of 8 credit hours of 400-level undergraduate coursework can be counted to the degree. Remaining credits must be in 500-level or higher courses.
3. A maximum of 15 credit hours outside of the ECE department can be counted to the degree.