

# Software

## Master of Engineering: 30 Credits / 10 Courses

Students pursuing this option must complete six courses from the core curriculum. Students must also register for four electives from identified technical areas such as cybersecurity, computer engineering, systems engineering or create an individual plan that meets their specific career goals. There is no research or thesis required for this degree.

Software Core (take six):		
	ENPM611 Software Engineering*	(every fall and spring)
	ENPM612 System & Software Requirements* [ENPM611]	(every spring)
	ENPM613 Software Design and Implementation* [ENPM611]	(every fall)
	ENPM614 Software Testing and Maintenance* [ENPM611]	(every spring)
	ENPM696 Reverse Software Engineering* [ENPM691]	(every fall)
	ENPM808E Managing Software Engineering Projects*	(every spring)

### Software Technical electives (choose four):

Complete four courses in one technical area below or create an individual plan approved by advisor.

Additional Pre-approved electives		
	ENPM8080 AI-based Software Systems*	(every other fall)
	ENPM809R Software Defined Networking	
	ENPM809W Security and Software*	(every other fall)

Computer Engineering (four courses)		
	ENPM607 Computer System Design	(every 1.5 years)
	ENPM609 Microprocessor-Based Design	(every 1.5 years)
	ENPM610 Digital VLSI Design	(every 1.5 years)
<i>Plus one of the following courses</i>		
	ENPM675 Operating System Design	(every other summer)
	ENPM676 VLSI Testing and Design for Testability	(every other summer)
	ENPM615 Embedded Systems	(every spring)

Cybersecurity (four courses)		
	ENPM685 Security Tools for Information Security*	(every spring)
	ENPM686 Information Assurance*	(every spring)
	ENPM691 Hacking of C programs & Unix Binaries*	(every fall and spring)
	ENPM693 Network Security*	(every spring)
	ENPM694 Networks and Protocols*	(every fall)
	ENPM695 Secure Operating Systems* [ENPM691]	

Systems Engineering (four courses)		
	ENSE621 Systems Concepts, Issues, and Processes*	(every fall)
	ENSE622 Systems Req., Design and Trade-Off Analysis* [ENSE621/ENPM641]	(every spring)
	ENSE623 Systems Projects, Validation and Verification* [ENSE622/ENPM642]	(every fall)
<i>Plus one of the following courses</i>		
	ENSE624 Human Factors in Systems Engineering*	(every spring)
	ENSE626 System Life Cycle Cost Analysis and Risk Management*	(every fall)

NOTE: Any courses not listed above must be approved by the Senior Academic Advisor **PRIOR** to registration.

KEY	
Online Option *	(offering information)
[Prerequisite course]	