

# ELECTRICAL AND COMPUTER ENGINEERING, MASTER OF ENGINEERING (M.ENG.)

**Non-thesis only:** 30 credits

All Professional Master of Engineering Programs consist of 10 courses/30 credits. All students are expected to complete a preliminary course plan for their intended degree program. Degree planning worksheets can be found here: <https://advancedengineering.umd.edu/degree-planning-sheets> (<https://advancedengineering.umd.edu/degree-planning-sheets/>)

The student chooses an area of concentration offered by an engineering department and completes 30 credit hours of approved coursework with an average grade of B. The coursework, which allows up to 12 credits at the 400-level, must be approved by the program's departmental faculty advisor.

Students complete six core courses and four electives. Two available focus areas include Computer Engineering (1) and Communication and Signal Processing (2).

## Computer Engineering

Course	Title	Credits
Complete five of the following core courses:		15
ENPM617	Compilers	
ENPM607	Computer System Design and Architecture	
ENPM609	Microprocessor-Based Design	
ENPM610	Digital VLSI Design	
ENPM615	Embedded Systems	
ENPM674	Design and Synthesis of Digital Systems	
ENPM675	Operating System Design	
ENPM676	VLSI Testing and Design for Testability	
Select at least one of the following additional core courses:		3
ENPM600	Probability and Stochastic Processes for Engineers	
ENPM601	Analog and Digital Communication Systems	
ENPM602	Data Networks	
ENPM603	Theory and Applications of Digital Signal Processing	
ENPM616	Wireless Communications: Systems and Network Design Principles	
ENPM677	Wireless Sensor Networks	
ENPM611	Software Engineering	
ENPM612	System and Software Requirements	
ENPM613	Software Design & Implementation	
ENPM614	Software Testing & Maintenance	
ENPM696	Reverse Software Engineering	
ENPM808	Advanced Topics in Engineering (ENPM808E)	
Other pre-approved electives:		12
ENPM691	Hacking of C programs and Unix Binaries	
ENPM694	Networks and Protocols	
ENPM808	Advanced Topics in Engineering (ENPM808B)	

ENPM808	Advanced Topics in Engineering (ENPM808D)	
ENPM808	Advanced Topics in Engineering (ENPM808X)	
ENPM809	Special Topics in Engineering (ENPM809P)	
ENPM809	Special Topics in Engineering (ENPM809X)	
ENPM690		
<b>Total Credits</b>		<b>30</b>

## Communication and Signal Processing

Course	Title	Credits
Complete five of the following core courses:		15
ENPM600	Probability and Stochastic Processes for Engineers	
ENPM601	Analog and Digital Communication Systems	
ENPM602	Data Networks	
ENPM603	Theory and Applications of Digital Signal Processing	
ENPM616	Wireless Communications: Systems and Network Design Principles	
ENPM677	Wireless Sensor Networks	
Select at least one of the following additional core courses:		3
ENPM611	Software Engineering	
ENPM612	System and Software Requirements	
ENPM613	Software Design & Implementation	
ENPM614	Software Testing & Maintenance	
ENPM808	Advanced Topics in Engineering (ENPM808E)	
ENPM696	Reverse Software Engineering	
ENPM607	Computer System Design and Architecture	
ENPM609	Microprocessor-Based Design	
ENPM610	Digital VLSI Design	
ENPM615	Embedded Systems	
ENPM617	Compilers	
ENPM674	Design and Synthesis of Digital Systems	
ENPM675	Operating System Design	
ENPM676	VLSI Testing and Design for Testability	
Other pre-approved electives:		12
ENPM631	TCP/IP Networking	
ENPM632	Advanced TCP/IP Networking	
ENPM693	Network Security	
ENPM808	Advanced Topics in Engineering (ENPM808B)	
ENPM808	Advanced Topics in Engineering (ENPM808W)	
ENPM808	Advanced Topics in Engineering (ENPM808Y)	
ENPM808	Advanced Topics in Engineering (ENPM808Z)	
ENPM809	Special Topics in Engineering (ENPM809F)	
ENPM809	Special Topics in Engineering (ENPM809G)	
ENPM809	Special Topics in Engineering (ENPM809L)	
ENPM809	Special Topics in Engineering (ENPM809R)	
<b>Total Credits</b>		<b>30</b>