MARYLAND APPLIED GRADUATE ENGINEERING

Embedded Systems

Master of Engineering: 30 Credits / 10 Courses

Students pursuing this option must successfully complete 4 core courses, at least 2 ENPM Embedded Systems electives, and up to 4 technical electives from the approved list of courses. Students should consult with their advisor prior to registering and have pre-approval for all technical electives. There is no research or thesis required for this degree.

Embedded Systems Core Courses (take four):		
	ENPM615 Embedded Systems*	(every fall)
	ENPM818G Embedded Systems Hardware* *[ENPM615]*	(every spring)
	ENPM818I Embedded Software Design and Optimization*	(Fall 2025, every 1.5 years)
	ENPM818J (Real Time) Operating Systems*	(every spring)

Embedded Systems Electives (Choose three):**		
	ENPM818K Embedded System and IoT Security*	(every spring)
	ENPM818L Low Power Design for Embedded Systems*	(every fall)
	ENPM818M Introduction to Networking and Distributed Systems 5G/6G*	(every fall)
	ENPM664 Embedded System Hacking and Security*	(every spring)
	ENPM818B Smart Grid*	
	ENPM818V 5G Advanced Communication Networks and Devices, System Designs and Protocols*	(Spring 2026)

Note: Any taken over the 3 required count as other technical electives

Pre-approved Technical Electives (Choose three):		
	ENAI602/ENPM808B Foundations of Machine Learning for Engineering AI* *[ENAI600 and ENAI601]*	(every spring)
	ENAI603 Foundations of Data Science for Engineering AI*	(every spring)
	ENPM808Y Fundamental Concepts of AI and Machine Learning, and Their Applications*	(TBD)
	ENPM809G Network Data Science*	(Spring 2026, every 1.5 years)
	ENPM809X Data and Algorithms*	(Spring 2027)
	ENPM809F Internet of Things*	(TBD)
	ENPM691 Hacking of C programs and Unix Binaries*	(every fall and spring)
	ENPM655 AI-based Software Systems*	(Fall 2026, every other fall)
	BIOE658E Biomedical Device Developments*	
	BIOE658C Bioinformatics*	
	ENCE677 OR Models for Transportation Systems Analysis	
	ENPM667 Control of Robotic Systems*	(every fall)
	ENSE621 Systems Engineering Concepts and Processes: A Model-Based Approach*	
	ENPM808 Independent Study Project Course*	

*NOTE: Any courses not listed above must be approved by the Program Manager for Academic Advising **PRIOR** to registration.*

ENPM808 eligibility and application information can be found at https://mage.umd.edu/enpm808-form Im

***Important Note: Students admitted prior to Spring 2026, can follow the previous degree requirements, which required 2 Embedded Systems Electives and 4 Technical Electives*

KEY	
Online Option *	(offering information)
[Prerequisite course]	TBD - no next planned offering at this time

NOTE: All offerings are tentative and subject to change.

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