



# 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* (TBD)
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://image.umd.edu/enpm808-form> |m

\*\*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.



MARYLAND APPLIED  
GRADUATE ENGINEERING

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