

ROBOTICS ENGINEERING



A. JAMES CLARK
SCHOOL OF ENGINEERING

MASTER OF ENGINEERING

The Master of Engineering program in robotics is designed to meet the educational needs of engineering professionals currently working in or wishing to enter the rapidly developing field of robotic and autonomous systems. Our program is interdisciplinary in nature, emphasizes systems thinking, and offers flexibility to concentrate in a variety of areas. Our courses are taught by faculty and professionals at the forefront of advances in robotics. These courses combine on-campus learning with live online streaming and the option for later viewing. There is no research or thesis required.

GRADUATE CERTIFICATE IN ENGINEERING

The Graduate Certificate program in robotics is designed to meet the educational needs of engineering professionals seeking to obtain added credentials in robotics. The certificate requires completion of four introductory graduate level courses. Certificate credits can be applied towards the Master of Engineering degree.

OUR STRENGTHS

The Master of Engineering program in robotics is administered by the Maryland Robotics Center,

GO FURTHER

With cutting-edge interdisciplinary robotics education for engineering professionals.

an **interdisciplinary** research center housed in the Institute for Systems Research within the A. James Clark School of Engineering at the University of Maryland. The Clark School is ranked among the **top 25** in the world. The mission of the Maryland Robotics Center is to advance robotic systems, underlying component technologies, and applications of robotics through interdisciplinary research and educational programs based on a **systems approach**. The center's research activities involve **all aspects of robotics** including development of component technologies (e.g., sensors, actuators, structures, and communication), novel robotic platforms, and intelligence and autonomy for robotic systems. Current research areas include: collaborative, cooperative, networked robotics; medical robotics; miniature robotics; robotics for extreme environments; unmanned vehicles; cognitive robotics; bio-inspired robots; and social robots. The center consists of 34 faculty members and 20 laboratories that feature state-of-the-art robotics technologies. The center also **collaborates** with nearby federal labs such as the Army Research Lab, the Naval Research Lab, the National Institute of Standards and Technology, and NASA.

OFFICE *of* ADVANCED ENGINEERING EDUCATION
advancedengineering.umd.edu/robotics

ROBOTICS ENGINEERING

NOW IS THE TIME TO START!

Learn More and Go Further in your career with a graduate engineering degree designed for working engineers from one of the nation's top-ranked engineering schools. The University of Maryland and the Clark School of Engineering have been leaders in distance education for many years and have earned a reputation for offering high-quality academic programs around the world.

MASTER OF ENGINEERING

- 10 COURSES (30 CREDITS) - including 4 CORE COURSES and 6 TECHNICAL ELECTIVES
- NO THESIS/ NO RESEARCH
- NO COMPREHENSIVE EXAM

GRADUATE CERTIFICATE IN ENGINEERING

- 4 CORE COURSES (12 CREDITS)

CORE COURSES - REQUIRED:

- Introduction to Robot Modeling
- Control of Robotic Systems
- Planning for Autonomous Robots
- Perception for Autonomous Robots

TECHNICAL ELECTIVES

www.advancedengineering.umd.edu/robotics

CURRICULUM

The curriculum is designed to cover fundamental and applied topics in design, modeling, and control of robotic systems as well as planning and perception for autonomous robots. Students are able to tailor their program within one of four areas of specialization to gain expertise based on the latest breakthroughs in robotics. These areas include: Optimization, Decision Making, and Algorithms; Performance Analysis and Design Methods; Modeling, Systems and Control; and Sensing, Vision and Perception.

ADMISSION REQUIREMENTS

- A bachelor's degree in an engineering discipline from an accredited institution. Courses in mathematics (Calculus I, II, III, and Differential Equations) are required to be considered for admission
- 3.0 GPA or better
- Three recommendation letters
- Graduate Record Exam is NOT required
- TOEFL is required for international students
- Official copies of transcripts

Completed applications are reviewed and considered for admission on a case-by-case basis.

DOMESTIC DEADLINES

FALL - August 1

SPRING - December 15

SUMMER - May 1

INTERNATIONAL DEADLINES

FALL - February 1

SPRING - October 15

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Contact us now to find out how to advance your career.

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