

This is a cutting edge program. Look around at the systems we rely on everyday: your smart fridge, your car, your tv are all embedded systems. The skill level needed to develop and build these systems is complex and intricate.

DR. ANKUR SRIVASTAVA  
PROFESSOR AND DIRECTOR,  
INSTITUTE FOR SYSTEMS RESEARCH

**TOP EMBEDDED SYSTEMS POSITIONS**

- Biomedical Engineer
- Embedded Systems Architect
- Embedded Software Engineer
- Firmware Engineer
- Mobile App Developer
- R&D Engineer



A. JAMES CLARK  
SCHOOL OF ENGINEERING

The A. James Clark School of Engineering is a catalyst for high-quality research, innovation, and learning, providing students the resources to be engaged problem-solvers and entrepreneurial thinkers. Pursue a degree tailored to your career interests through the top-ranking Maryland Applied Graduate Engineering programs.

DON'T WAIT TO FURTHER YOUR CAREER



MARYLAND APPLIED  
GRADUATE ENGINEERING

**FOR MORE INFORMATION**

We welcome your interest. For complete information, including course descriptions, deadlines, and schedules please contact us.

WEBSITE: [mage.umd.edu](http://mage.umd.edu)

TEL: 855-309-8379

EMAIL: [mage@umd.edu](mailto:mage@umd.edu)

GRADUATE ENGINEERING DEGREES IN

# EMBEDDED SYSTEMS

Explore the design, operation, and maintenance of microprocessor based systems across industries.

# DON'T WAIT TO FURTHER YOUR CAREER

Discover how Maryland Applied Graduate Engineering (MAGE) programs prepare you to solve the most daunting engineering challenges and give you a competitive edge in today's market.

- Focus on a specialized area of engineering and target coursework to your interests.
- Learn from industry leaders who incorporate the latest education tools to create collaborative, interactive learning environments.
- Balance work and family through the flexibility of online or in-person classes.
- Access student services online to quickly receive the support you need regarding admissions, financial aid, or career services.

A leader in graduate engineering education for professionals, we are proud to serve the region's engineering community. Through our programs, advance your career with a degree from the A. James Clark School of Engineering, consistently ranked among the top 20 in the U.S. Located just a few miles from Washington, D.C., Maryland Engineering is at the center of a constellation of high-tech companies and federal laboratories, offering students and faculty access to unique professional opportunities.



## EMBEDDED SYSTEMS AT MARYLAND

Embedded systems—an essential part of modern technology—are a combination of computer hardware, software, and mechanical parts that perform a specific function, often in real time. These systems require a high degree of predictability and reliability; have a variety of size, power, safety, and security requirements; and typically communicate with one another and interact via sensors and actuators. As demand grows for complex government and industrial installations with embedded systems and the market for consumer electronics with dedicated computer systems expands, the embedded engineering industry is expected to grow exponentially. Trained engineers will be in high demand to design, optimize, and maintain these systems. This program leverages the university's unique systems strengths, including the Institute for Systems Research, an interdisciplinary research unit within the A. James Clark School of Engineering and a leader in using model-based systems engineering in its research efforts.

## GRADUATE PROGRAMS IN EMBEDDED SYSTEMS

The emerging and rapidly growing field of embedded systems—also called Internet of Things or IoT—is the future of mechanical and electronic systems. The **Master of Engineering** and **Graduate Certificate in Engineering** programs are meeting the needs of working engineers and technical professionals looking to develop tools to address systems problems across diverse technical areas. Our interdisciplinary programs cover both the technical and management aspects of embedded systems design, with courses on embedded software, embedded hardware, networking and distributed systems, and a hands-on hacking lab. Students also can learn about emerging topics in embedded systems including security and privacy, low power and energy efficient design, project management, data science and machine learning, as well as specific embedded systems in smart grids, smart homes, medical devices, and vehicular systems.

## ADMISSION REQUIREMENTS

- A bachelor's degree in a STEM field from an accredited institution
- GPA of 3.0 or better
- Two letters of recommendation (M.Eng applicants only)
- Unofficial copies of transcripts
- For international students: an official English proficiency score report international students
- Official GRE scores considered but not required
- Completed applications considered for admission on a case-by-case basis

## DEGREE REQUIREMENTS

### MASTER OF ENGINEERING

- 10 courses (30 Credits)
- No thesis / no research
- No comprehensive exam

### GRADUATE CERTIFICATE IN ENGINEERING

- 4 courses (12 credits)

### FOR MORE INFORMATION

Visit [mage.umd.edu/embedded-systems](http://mage.umd.edu/embedded-systems) or scan here for more specific



requirements, available courses, and degree planning sheets.

## APPLICATION DEADLINES

### ON-CAMPUS DOMESTIC

**FALL** July 31

**SPRING** December 15

**SUMMER** May 15

### ON-CAMPUS INTERNATIONAL

**FALL** March 8

**SPRING** September 24

### ONLINE DOMESTIC AND INTERNATIONAL

**FALL** July 31

**SPRING** December 15

**SUMMER** May 15

## TAKE THE NEXT STEP

Are you ready to take the next step in your engineering career journey? Explore program options, application requirements, and deadlines through virtual and in-person open house sessions.

TO LEARN MORE, VISIT  
[mage.umd.edu/embedded-systems](http://mage.umd.edu/embedded-systems)