

# RELIABILITY ENGINEERING (ENRE)

Graduate Degree Program  
College: Engineering

## Abstract

Reliability Engineering is an interdisciplinary program of the Department of Mechanical Engineering. The academic and research programs are based upon the recognition that the performance of a complex system is affected by engineering inputs that begin at conception and extend throughout its lifetime. Students may specialize in Assessment (Root-Cause Failure Analysis, Probabilistic Risk Assessment, Common-Cause Failures); Testing and Operation (Operator Advisory Systems, Human Reliability, Software Reliability); Manufacturing (Statistical Process Control, Improved Manufacturing Methods); Component and Structures Reliability (Microelectronics and Materials); or Electronic Packaging Reliability.

## Financial Assistance

Financial assistance is available to highly qualified students in the form of research and teaching assistantships. The most outstanding applicants are offered fellowships. Students seeking financial assistance are asked to submit with their applications a current resume or CV as well as a statement regarding their qualifications and/or past research or teaching experience. Financial assistance is sought for all worthy students.

## Contact

**Katrina Groth**  
**Associate Professor, Co-Director of Graduate Studies, and Director of the Graduate Program in Reliability Engineering**  
**Department of Mechanical Engineering**  
0151 Glenn L. Martin Hall  
4298 Campus Drive  
University of Maryland  
College Park, MD 20742  
**Telephone:** 301.405.5215  
**Email:** kgroth@umd.edu

**Peter Sandborn**  
**Professor, Associate Chair and Director of Graduate Studies**  
**Department of Mechanical Engineering**  
2174 Glenn L. Martin Hall  
4298 Campus Drive  
University of Maryland  
College Park, MD 20742  
**Telephone:** 301.405.3167  
**Fax:** 301.405.8015  
**Email:** sandborn@umd.edu

**Kerri Poppler James**  
**Director, Academic and Student Affairs**  
**Department of Mechanical Engineering**  
2180 Glenn L. Martin Hall  
4298 Campus Drive  
University of Maryland  
College Park, MD 20742  
**Telephone:** 301.405.8601

**Fax:** 301.405.8015  
**Email:** kjames3@umd.edu

**Megan Wells**  
**Program Manager**  
**Department of Mechanical Engineering**  
2170 Glenn L. Martin Hall  
4298 Campus Drive  
University of Maryland  
College Park, MD 20742  
**Telephone:** 301.405.4216  
**Fax:** 301.405.8015  
**Email:** mpetry@umd.edu

**Segen Habte**  
**Academic Program Specialist**  
**Department of Mechanical Engineering**  
2172 Glenn L. Martin Hall  
4298 Campus Drive  
University of Maryland  
College Park, MD 20742  
**Telephone:** 301.405.8681  
**Fax:** 301.405.8015  
**Email:** shabte@umd.edu

**Website:** <http://enre.umd.edu> (<https://crr.umd.edu/educational-programs/>)

**Courses:** ENRE (<https://academiccatalog.umd.edu/graduate/courses/enre/>)

## ADMISSIONS

### General Requirements

- Statement of Purpose
- Transcript(s)
- TOEFL/IELTS/PTE (international graduate students (<https://gradschool.umd.edu/admissions/english-language-proficiency-requirements/>))

### Program-Specific Requirements

- Letters of Recommendation (3)
- Graduate Record Examination (GRE) (optional)
- CV/Resume
- Description of Research/Work Experience (optional)
- Writing Sample (optional)

The Program offers graduate study leading to the Master of Science, Professional Master of Engineering (offered through the Office of Advanced Engineering Education), and Doctor of Philosophy degrees and is open to students who have a Bachelor of Science degree in engineering, physics, or mathematics and obtained a GPA of at least 3.0 on a 4.0 scale from accredited programs. An individual plan of graduate study compatible with the student's interest and background is established by the student in consultation with an advisor. In some cases, it may be necessary to require background courses to fulfill prerequisites.

## APPLICATION DEADLINES

Type of Applicant	Fall Deadline	Spring Deadline
<b>Domestic Applicants</b>		
US Citizens and Permanent Residents	May 9, 2025	October 11, 2024
<b>International Applicants</b>		
F (student) or J (exchange visitor) visas; A, E, G, H, I and L visas and immigrants	March 7, 2025	September 20, 2024

### RESOURCES AND LINKS:

**Program Website:** <http://enre.umd.edu>

**Application Process:** [gradschool.umd.edu/admissions/application-process/step-step-guide-applying](https://gradschool.umd.edu/admissions/application-process/step-step-guide-applying) (<https://gradschool.umd.edu/admissions/application-process/step-step-guide-applying/>)

## REQUIREMENTS

- Reliability Engineering, Doctor of Philosophy (Ph.D.) (<https://academiccatalog.umd.edu/graduate/programs/reliability-engineering-enre/reliability-engineering-phd/>)
- Reliability Engineering, Master of Science (M.S.) (<https://academiccatalog.umd.edu/graduate/programs/reliability-engineering-enre/reliability-engineering-ms/>)

## FACILITIES AND SPECIAL RESOURCES

Reliability engineering faculty, researchers, and students leverage state-of-the-art research equipment, technology, and systems to develop new methods, create innovative tools, and find practical solutions to the most pressing societal concerns. More information about our research labs and centers can be found here: <http://enre.umd.edu>.