

the MS in Engineering program at Rowan University



Rowan University is located in Glassboro, NJ, 30 minutes from Philadelphia and one hour from the Jersey Shore. The college of engineering at Rowan University is renowned for its multidisciplinary, hands on approach to engineering education. The college has an excellent student to faculty ratio, allowing MS Students to receive significant individual attention from faculty.

The Mechanics and Materials focus is available to graduate students in either the Mechanical Engineering or Civil and Environmental Engineering programs. The sequence involves three semesters and one summer of interdisciplinary coursework, plus research that culminates in a Master's Thesis. Students pursuing this focus will develop a strong foundation in mechanics and the behavior of materials through 24 credit hours of coursework, complemented by research - where the student works closely with one or more faculty members. Most projects are externally sponsored, allowing students to receive tuition scholarships and stipends, while working on cutting-edge topics. Depending on the chosen electives and research topic, this focus is appropriate for students interested in biomechanics, dynamics, geotechnical, materials, structures, or transportation.

Recent graduates have gone on to careers in government and industry, or pursued doctorates.

Typical Course of Study

Fall Semester	
3 cr.	Advanced Solid Mechanics or Rheology
3 cr.	Elective
3 cr.	Research
Spring Semester	
3 cr.	Finite Element Analysis
3 cr.	Elective
3 cr.	Research
Summer	
3 cr.	Engineering Applications of Analysis
3 cr.	Strategic Engineering Management
Fall Semester	
3 cr.	Elective
3 cr.	Research

Affiliated Faculty

Dr. T.R. Chandrupatla (ME) – FEA, optimization
 Dr. Douglas Cleary (CEE) – Reinforced concrete
 Dr. Eric Constans (ME) - Dynamics
 Dr. Ralph Dusseau (CEE) – Bridge engineering
 Dr. Jennifer Kadlowec (ME) - Biomechanics
 Dr. Yusuf Mehta (CEE) – Pavement materials
 Dr. James Newell (ChE) - Polymers
 Dr. William Riddell (CEE) – Failure mechanics
 Dr. Beena Sukamaran (CEE) – Particulate mechanics
 Dr. Paris von Lockette (ME) – Polymers and composites

Electives offered in

Analytical Dynamics
 Biomaterials
 Bridge Engineering
 Computational Materials Science
 Elastic Stability
 Fatigue and Fracture Mechanics
 Foundation Engineering
 Pavement Materials
 Prestressed Concrete Design
 Reinforced Concrete Design
 Rheology
 Steel Design
 Structural Analysis
 Structural Mechanics

Funding Opportunities

Research assistantships are awarded competitively, based on funded projects. For full consideration for a research assistant position, we recommend that your application is submitted by February 1st. Initial decisions on funding are typically made in April. However, additional offers are sometimes made later, as additional sources of funding are secured.

Recent Funded Projects

Biomechanics of neck range of motion for crash safety studies.
 Dynamic analysis of bridges; Energy absorbing utility poles;
 Evaluation of modified binder; Evaluation of warm mix asphalt;
 FEA analysis of flexible airport pavements; Imaging of sand particles to characterize effect of shape on mechanical properties; Improving biofidelity of child crash-test dummies; Magneto rheological elastomers; Mechanistic-empirical design of asphalt pavements; Performance of subbase materials in airport runways.

For More Information:

<http://www.Rowan.edu/engineering>

Application Materials:

http://www.rowan.edu/graduateschool/prospective_students/grad_application/index.htm