Science, Technology, Engineering, & Mathematics (STEM) Division
3322 College Drive, Vineland, NJ 08360
856-691-8600

EG 201: Engineering Statics

Syllabus

Lecture Hours/Credits: 3/3

Catalog Description

Prerequisites: MA 130

This course covers vector calculation of forces, moments, and equilibrium of particles and rigid bodies, centroid and moment of inertia. Students will gain an adequate knowledge of simple mechanical systems and develop the necessary skills to analyze a moderately complicated system.

Textbook and Course Materials

It is the responsibility of the student to confirm with the bookstore and/or their instructor the textbook, handbook, and any other materials required for their specific course and section.

Click here to see current textbook prices at cccnj.bncollege.com.

Evaluation Assessment

Online Proctoring
All courses offered at RCSJ, whether they are web-enhanced, hybrid, or fully online, may include assessments that make use of Online Proctoring. To find out more about Online Proctoring, and to learn about the minimum technical requirements, visit rcsj.edu/elearning/online-proctoring.

Grading Distribution

Grading to be determined by individual instructors.

Individual instructors may include the following assessment(s):

- Homework
- Two Exams
- Final Exam

Grading

The grading scale for each course and section will be determined by the instructor and distributed the first day of class.

Rowan College of South Jersey Core Competencies

(Based on the NJCCC General Education Foundation - August 15, 2007; Revised 2011; Adopted 2014)

This comprehensive list reflects the core competencies that are essential for all RCSJ graduates; however, each program varies regarding competencies required for a specific degree. Critical thinking is embedded in all courses, while teamwork and personal skills are embedded in many courses.

1. **Written and Oral Communication**: Students will communicate effectively in both speech and writing.
2. **Quantitative Knowledge and Skills:** Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems
3. **Scientific Knowledge and Reasoning:** Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.
4. **Technological Competency:** Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals
5. **Society and Human Behavior:** Students will use social science theories and concepts to analyze human behavior and social and political institutions and to act as responsible citizens.
6. **Humanistic Perspective:** Students will analyze works in the fields of art, history, music, or theater; literature; philosophy and/or religious studies; and/or will gain competence in the use of a foreign language
7. **Historical Perspective:** Students will understand historical events and movements in World, Western, non-Western or American societies and assess their subsequent significance.
8. **Global and Cultural Awareness:** Students will understand the importance of a global perspective and culturally diverse peoples.
9. **Ethical Reasoning and Action:** Students will understand ethical issues and situations.
10. **Information Literacy:** Students will address an information need by locating, evaluating, and effectively using information.

EG 201 Core Competencies

This course focuses on three of RCSJ's Core Competencies:

- Please add core competencies

Student Learning Outcomes: Engineering Statics

Successful completion of EG 201 will help students:	**RCSJ Core Competencies**	**Evaluation / Assessment** **(Additional means of evaluation may be included by individual instructors)**
Practice principles of manipulation of vectors		• Homework • Two Exams • Final Exam
Explain laws of motion		• Homework • Two Exams • Final Exam
Recognize the conditions of static equilibrium		• Homework • Two Exams • Final Exam
Examine a system at static equilibrium		• Homework • Two Exams • Final Exam
Modify a system of forces		• Homework • Two Exams • Final Exam
Evaluate reaction and contact forces		• Homework • Two Exams • Final Exam
Calculate the center of gravity and centroid of a system		• Homework • Two Exams • Final Exam
Recognize frictional forces		• Homework • Two Exams • Final Exam
Design and analyze systems of basic trusses		• Homework • Two Exams • Final Exam
Perform vector manipulation		• Homework • Two Exams • Final Exam
Analyze the conditions of equilibrium		• Homework • Two Exams • Final Exam
Simplify force system		• Homework • Two Exams • Final Exam
Calculate the positions of center of gravity of an object		• Homework • Two Exams • Final Exam

Topical Outline

- Vectors and vector operations
- Equilibrium pf particles
- Moment of a force
- Force system resultant
- Equilibrium of rigid body
- Trusses and structural analysis
- Center of gravity and Centroid
- Moments of Inertia

Affirmative Action Statement
The Board of Trustees is committed to providing a work and academic environment that maintains and promotes affirmative action and equal opportunity for all employees and students without discrimination on the basis of certain enumerated and protected categories. These categories are race, creed (religion), color, national origin, nationality, ancestry, age, sex (including pregnancy and sexual harassment), marital status, domestic partnership or civil union status, affectional or sexual orientation, gender identity or expression, atypical hereditary cellular or blood trait, genetic information, liability for military service, or mental or physical disability, including AIDS and HIV related illnesses.

For questions concerning discrimination, contact Almarie J. Jones, Special Assistant to the President, Diversity and Equity/Title IX and Compliance, 856-415-2154 or ajones@rcsj.edu or (Cumberland) Nathaniel Alridge, Jr., JD, Director, Diversity and Equity/Title IX and Judicial Affairs, 856-691-8600, ext. 1414 or nalridge@rcsj.edu. For disability issues or any barriers in the learning or physical environment related to a document condition/disability please contact: Gloucester campus – Carol Weinhardt, Director, Department of Special Services, ADAAA/504 Officer at 856-415-2247 or cweinhar@rcsj.edu; or Cumberland Campus – Meredith Vicente, Senior Director, Department of Special Services/Project Assist at 856-200-4688 or mvicent1@rcsj.edu

Department of Special Services

The Department of Special Services is committed to providing support services and ensuring equal access to eligible students with documented conditions/disabilities as outlined by the Americans with Disabilities Act (ADA) and the Americans with Disabilities Act with Amendments Act (ADAAA).

(Gloucester Campus Location and Contact)

Location: Instructional Center, room 425A.

Primary Contact: Director, Carol Weinhardt, (email) cweinhar@rcsj.edu; or (phone) 856-415-2247.

(Cumberland Campus Location and Contact)

Location: Center for Academic & Student Success (CASS)

Primary Contact: Senior Director, Meredith Vicente, (email) mvicent1@rcsj.edu; or (phone) 856-200-4688.

Reporting Allegations of Sexual Assault Resource Referrals *(8/2021)*
Cumberland Campus

There are multiple safe places for students to report allegations of sexual assault, both on and off campus. Reports of sexual assault can be made to any of the following offices listed in the chart below.

All students are encouraged to report alleged crimes on campus.
Employees must report crimes that pose an immediate threat to the campus Security Office, the local Police Department or the Sheriff's Office.

Service	Resource	Phone Number/Location/Website
Non-Confidential Reporting Law Enforcement	Vineland Police Dept. Millville Police Department Cumberland Co. Sheriff's Office Cumberland County Emergency Services Cumberland Campus Security 856-200-4706 (Direct)	856-691-4111 856-825-7010 856-451-4449 9-1-1 Andres Lopez, Director Safety and Security 856-200-4706
Non-Confidential On-Campus Reporting Support Services	Almarie J. Jones Special Assistant to the President Diversity and Equity, Title IX and Compliance Nathaniel Alridge, Jr., JD, Director Diversity and Equity, Title IX and Judicial Affairs Kellie W. Slade Executive Director Student Services, Student Life	856-415-2154 Gloucester Campus College Center, Room116 *ajones@rcsj.edu* 856-498-9948 Catherine J. Arpino Education and Humanities Center, *nalridge@rcsj.edu* 856-200-4615 Student & Enrollment Services Center *kslade@rcsj.edu*
Confidential On-Campus Counseling and Support Services	Student Counseling and Wellness Center John Wojtowicz, LCSW	Academic Building – 1st floor 856-200-4760 *jwojtowi@rcsj.edu*
Confidential Off-Campus Full-Service Support	Center for Family Services – Services Empowering Rights of Victims (SERV)	24/7 Hotlines Cumberland Co. – 1-800-225-0196 *www.centerffs.org/serv*
Hospital Sexual Assault Nurse Examiner on Site	Inspira Medical Center Vineland	1505 W. Sherman Ave., Vineland, NJ 856-641-8000