

ROWAN COLLEGE  
CURRICULUM COMMITTEE

PROPOSAL TITLE: Statics 0901-271 R

UNDERGRADUATE  GRADUATE 2 CREDIT HOURS

SPONSOR(S): Ralph Alan Dusseau and School of Engineering Curriculum Committee

DEPARTMENT & TELEPHONE# Civil Engineering Program, School of Engineering

CHECK ONE:  COURSE  MINOR PROGRAM  CONCENTRATION  SPECIALIZATION  
 ACHIEVEMENT CERTIFICATE  CERTIFICATION PROGRAM  MAJOR PROGRAM

| STEP #1 (DEPARTMENT)   | STEP #2 (RECEIPT)   | STEP #3 (SCHOOL)   |
|--|---|--|
| <p>APPROVED/DATE: <u>4-24-96</u></p> <p>NOT APPROVED/DATE: _____</p> <p><i>[Signature]</i><br/>DEPT. CURRICULUM CHR.</p> <p>REVIEWED/DATE: <u>4-24-96</u></p> <p><i>[Signature]</i><br/>DEPT. CHR.</p> | <p>SCC# <u>96-97-02</u></p> <p>DATE RECEIVED: _____</p> <p style="text-align: center; font-size: 2em;">SENATE</p> <p style="text-align: center;">JUL 9</p> <p style="text-align: center; font-size: 1.5em;">RECEIVED</p> <p style="text-align: center;"><i>[Signature]</i><br/>SENATE CURRICULUM CHR.</p> | <p>REVIEWED DATE: <u>4-18-96</u></p> <p><input checked="" type="checkbox"/> RECOMMEND TO APPROVE</p> <p><input type="checkbox"/> RECOMMEND NOT TO APPROVE</p> <p style="text-align: center;">FORWARD FOR OPEN HEARING</p> <p><input checked="" type="checkbox"/> WITHOUT RESERVATIONS</p> <p><input type="checkbox"/> WITH RESERVATIONS</p> <p>COMMENTS: _____</p> <p><i>[Signature]</i><br/>SCHOOL COMMITTEE CHR.</p> |

| STEP #4 (ACADEMIC DEAN)   | COMMENTS:   |
|---|---|
| <p><input checked="" type="checkbox"/> RECOMMEND</p> <p><input type="checkbox"/> NOT RECOMMEND</p> <p><input type="checkbox"/> CONDITIONALLY RECOMMEND<br/>(SEE COMMENTS)</p> <p>DATE &amp; SIGNATURE, DEAN OF SCHOOL _____</p> | <p style="font-size: 2em; text-align: center;">RECOMMEND</p> <p style="text-align: center;"><i>[Signature]</i> <u>3/14/96</u></p> |

| STEP #5 (SENATE CURRICULUM COMMITTEE)   |
|---|
| <p>DATE OF OPEN HEARING <u>10-28-96</u></p> <p>APPROVED BY SENATE CURRICULUM COMMITTEE (DATE) <u>10-28-96</u></p> <p><input type="checkbox"/> RETURNED TO SPONSOR(S) FOR THE FOLLOWING REASONS:</p> <p>_____</p> <p>_____</p> |

| #6 (SENATE)  |
|--|
| <p>DATE PRESENTED TO SENATE <u>11-20-96</u> <span style="margin-left: 50px;"><input checked="" type="checkbox"/> APPROVED</span> <span style="margin-left: 50px;"><input type="checkbox"/> NOT APPROVED</span></p> <p>NOTIFICATION TO EXECUTIVE VICE PRESIDENT/PROVOST (DATE) _____</p> <p>SENATE CURRICULUM COMMITTEE CHAIR SIGNATURE/DATE <u><i>[Signature]</i> 12/18/96</u></p> |

STEP #7 (EXECUTIVE VICE PRESIDENT/PROVOST)

DATE RECEIVED 21 1997

APPROVED:  YES  NO

IF NO, REASONS ARE AS FOLLOWS:

STUDENT CREDIT HOURS 2

FACULTY LOAD HOURS 2

EQUALIZED CREDIT HOURS \_\_\_\_\_

OFFICIAL COPY & APPROVAL SHEET FILED (DATE) 1/30/97

SIGNATURE, EXECUTIVE VICE PRESIDENT/PROVOST C. Mathes

REGISTRAR

DATE APPROVED COURSE DESCRIPTION RECEIVED 14 MAR 97

HEGIS TAXONOMY AND COURSE NUMBER ASSIGNED 0901-271

DATE/SIGNATURE OF REGISTRAR B. J. Kelley

NOTIFICATION FORWARD:

SENATE CURRICULUM COMMITTEE CHAIRPERSON

DEPARTMENT CHAIRPERSON(S)

ACADEMIC DEAN(S)

REGISTRAR

SPONSOR(S)

## Course Proposal

### 1. Details:

- a) Course Title: Statics
- b) Sponsor: Dr. Ralph Alan Dusseau and School of Engineering Curriculum Committee
- c) Credit Hours: 2 credit hours
- d) Course Level: Sophomore (0901.271)
- e) Curricular Effect: Required course for civil, electrical, and mechanical engineering majors
- f) Prerequisites: Physics I and Calculus II
- g) Suggested Time/  
Scale of Implementation: three sections during fall semesters to be taught during 1st quarter
- h) Resources: Existing faculty will teach this course. Library acquisitions will be required.

### 2. Rationale:

The proposed course is the revised version of a course entitled "Introduction to Engineering Analysis" which was part of the Engineering Curriculum Proposal that was approved by the College Senate in December 1994. The proposed course is consistent with the establishment of the School of Engineering approved by the Board of Trustees in February 1995.

Engineering statics is one of the cornerstones of all civil and mechanical engineering programs. This course provides an essential bridge between the concepts of Physics I and three critical topics in civil and mechanical engineering: dynamics, solid mechanics, and structural analysis.

### 3. Essence of the Course:

#### a) Objectives:

Upon completion of the course, engineering students will be able to do the following:

1. Analyze the statics of particles including the analysis of force vectors and system resultants.
2. Analyze the statics of rigid bodies including the analysis of force and moment vectors and the analysis of force and moment system resultants.
3. Analyze the statics of structural systems including equilibrium analysis, structural analysis, determination of geometric properties, and analysis with distributed loadings.

b) Topical Outline:

The topical outline of the course may vary to some extent depending on the interests of the instructor and the students, and on advances in engineering technology. The topics to be covered will include the following:

Statics of Particles:

General Principles

Force Vectors and System Resultants

Statics of Rigid Bodies:

Force and Moment Vectors

Force and Moment System Resultants

Statics of Structures:

Equilibrium

Structural Analysis

Geometric Properties

Distributed Loadings

c) Evaluation and Grading Procedure of Students:

Student grades will be determined based on homework assignments and examinations.

d) Course Evaluation:

The proposed course will be evaluated based on student evaluations and curriculum review by engineering faculty.

4. Results of Consultations:

The proposed course is the revised version of a course called "Introduction to Engineering Analysis" which was part of the Engineering Curriculum Proposal that was approved by the College Senate in December 1994. Consultations were submitted with the original proposal as specified by the Curriculum Committee.

Catalog Description:

Statics (0901.271)

(Prerequisites: Physics I and Calculus II)

The course deals with the study of engineering statics which includes the statics of particles, the statics of rigid bodies, and the statics of structural systems. The study of structural systems includes equilibrium, structural analysis, and geometric properties of structural members.