DEPARTMENT OF INDUSTRIAL AND ENGINEERING TECHNOLOGY

Course number: ENT 287

Credit hours: Three semester hours

I. Title: Statics for Technology

II. Catalog Description:
A course covering the branch of mechanics which deals with the effects of forces acting on a body at rest. The course deals with the graphical and analytical study of force systems in equilibrium. This entails an understanding of applied and frictional forces, centers of gravity, and vectors.

III. Purpose of Objectives:
This is a required course for a degree in Civil Engineering Technology, Construction Technology, Drafting and Design Technology, Manufacturing Engineering Technology, and Mechanical Engineering Technology.

IV. Course Objectives:
4.1 General Course Objectives
4.1.1 Apply the laws of mechanics to solve physical problems of equilibrium.
4.1.2 Demonstrate various methods used to analyze rigid structures in equilibrium.
4.2 Specific Objectives
4.2.1 Discuss force resultants and force components.
4.2.2 Determine moments of forces.
4.2.3 Analyze force systems in static equilibrium.
4.2.4 Develop techniques for analysis of truss structures and mechanical frames and machines.
4.2.5 Lay geometry groundwork for future courses through study of centroids by composite areas.

V. Course Outline:
5.1 Basic Concepts
5.2 Principles of Statics
5.3 Resultants of Coplanar Force Systems
5.4 Equilibrium of Coplanar Force Systems
5.5 Analysis of Structures
5.6 Friction

VI. Instructional Activities:

6.1 Lecture

6.2 Individual Problems

6.4 Evaluation

3 Exams 20% X 3=	60%
Homework + Quizzes	20%
Final Exam:	20%

Total	100%

The instructor retains the right to adjust the evaluation system.

VII. Field and Clinical Experiences:

NA

VIII. Resources:

Computer Applications

IX. Grading Procedures:

Grading System

90 - 100 - A

80 - 89 - B

70 - 79 - C

60 - 69 - D

Below 60 - E

X. Attendance Policy:

Attendance is mandatory. Unexcused absences may result in a lower final grade.

XI. Academic Honesty Policy:

Cheating, plagiarism, submitting another person's material as one's own or doing work for another person which will receive academic credit are all impermissible. This includes the use of unauthorized books, notebooks, or other sources in order to secure or give help during an examination, the unauthorized copying of examinations, assignments, reports, or term papers, laboratory reports, drawings or the presentation of unacknowledged material as if it were the student's own work. Disciplinary action may result in failure of the course.

XII. Text and References:

Engineering Mechanics Statics, R.C. Hibbeler, MacMillan Publishing Company, New York, Twelfth Edition.

XIII. Prerequisites:

MAT 130, PHY 120

XIV. Murray State University endorses the intent of all federal and state laws created to prohibit discrimination. Murray State University does not discriminate on the basis of race, color, national origin, gender, sexual orientation, religion, age, veteran status, or disability in employment, admissions, or other provision of services and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities equal access to participate in all programs and activities. For more information, contact Sabrina Y. Dial, Director of Equal Opportunity, Murray State University, 103 Wells Hall, Murray, KY 42071-3318. Telephone: 270-809-3155 (voice), 270-809-3361 (TDD).

W. Palmer, 1/2011