EXPECTED EDUCATIONAL RESULTS
As a result of completing this course, the student will be able to do the following:

1. Apply sound analytical techniques and logical procedures in problem solving;
2. Correctly apply force, moment, couple, and resultant force or force-and-couple of a system of forces;
3. Apply vector methods to the solution of problems involving bodies in equilibrium;
4. Develop and apply solution techniques for the reactions between the members that make up trusses, frames and machines;
5. Solve introductory problems involving shear and bending-moment in beams;
6. Use the principles and solve problems involving dry friction;
7. Locate centroids and centers of mass of curves, areas and volumes by integration and the method of composite bodies.

GENERAL EDUCATION OUTCOMES
I. This course addresses the general education outcome relating to communications as follows
   
   A. Students enhance reading skills by reading topics to develop working knowledge of fundamental principles and laws from the prescribed textbook. They are also assigned other reading material that includes handouts and notes.

   B. Students develop writing skills by finding solutions to realistic examples and problems in a systematic way with careful evaluation of answer(s) for acceptability. They also learn to express in their own words when and why one approach to apply a law or principle would produce reasonable results and the other may not. Many problems require graphing or sketching diagrams as the first step which is a useful skill to not only provoke thinking about possible methods of solution but also an important tool as engineers who often are required to communicate effectively in work environment.

   C. Students improve their listening skills by actively participating in class discussion/lecture or demonstration the focus of which is to emphasize the importance of concepts and methods of statics and dynamics in subsequent courses in engineering curricula.

II. This course addresses the general education outcome relating to problem-solving and critical thinking skills in the following manner. Students

   A. Learn how and when to make assumptions as they develop a strategy to solve problems of various degree of difficulty which are a major part of their course work.

   B. Evaluate, judge and state if the answers are acceptable or otherwise.

I. This course addresses the general education outcome relating to mathematical concepts and scientific inquiry as follows:

   A. Use units appropriately (problems use both SI and US customary units) to manipulate equations and mathematical expressions that involve physical quantities.

   B. Use elementary differential and integral calculus, basic vector algebra to apply laws and principles in the form of equations to arrive at a solution.
ALL EER’S WERE ASSESSED THRU QUESTIONS IN THE FINAL EXAM

Dunwoody campus:

Fall & spring
Students scored 70% or higher in 101 questions out of a total of 330 questions ~31%

Comments:

The performance is below the average expected. However, most students understood the basic concepts of Statics (questions 1-5)

Many students complained, in both semesters, that lack of time to complete the exam was the cause of poor performance. In reviewing the exams, many students failed to begin their last problem. Many students selected the different orders in which to solve the problems on the test. This makes it difficult to assess the understanding shared by each student in the class for each problem.
Next time perhaps I will give equal weights for the problems.

Another observation is that students performed much better on concepts and problems treated earlier in the course rather than later.

Clarkston campus:

Fall:

Students scored 70% or higher in 78 questions out of a total of 147 that is 54%

Comments:

One was late and missed many classes. Three students taking more than 15 credits
Three students did not do homework regularly on time.
Five students had taken PHYS2211 more than three semesters ago.

Possibly reduce the complexity of problems to do in two hour exam.
Emphasize using tutors from Learning resource center.
Emphasize doing sample problems from the text.
Watch activity in icollege discussion board.

Spring:

Ten questions with a choice of picking seven. 18 students * 7 = 126
Students scored 70% or higher in 78 questions out of a total of 126 that is 62%

Comments:

Two students came late more than 50% of the time.
Two were taking 15 or more credits. One student had disability issue and was taking the course for the third time.
Consider giving more choice of problems to do in a two hour exam.
Consider testing concepts from the tests and problem solving from the final exam.
Emphasize using tutors from LRC (Learning resource center)
Emphasize doing sample problems from the text.
Watch activity in icollege discussion board.
The assessment results reflect the EEOs were achieved to a satisfactory level

Prepared by: Anant Honkan