

## Student Ratings Annotation Example

ME 3000: **Advanced Mechanical Engineering Analysis**

Fall Semester 2004

<i>Enrollment</i>	60
<i>Respondents</i>	32 (53%)

### Course Description

Mathematical modeling, analysis, and design of physical dynamic systems involving energy storage and transfer by lumped-parameter linear elements. Time-domain response by analytical methods and numeric simulation. Laboratory experiments. Prerequisites: Linear Algebra, Differential Equations, Probability & Statistics, Engineering Dynamics.

This is a 15-week advanced lecture and laboratory course that meets in three 1-hour time blocks and one 2-hour lab (taught by TAs). The 1-hour sessions include lectures about the primary theoretical material of systems dynamics, with derivations of fundamental principles, followed by worked examples similar to assigned homework problems. The lab sessions include 7 lab assignments and 7 discussion sessions. The lab assignments require students to conduct hands-on experiments relating to problems discussed in the large class sessions. Students are also required to devote time outside of class to assigned readings, lab write-ups, and homework.

*Students:* The course is a required undergraduate course for mechanical engineering majors and is a prerequisite for many of the required capstone sequences. About 50% of the students were juniors, 45% seniors, and 5% new graduate students.

### Student Ratings

Students appreciated that expectations were clear and grading processes were systematic and implemented fairly. They also took advantage of my frequently scheduled office hours those of my Teaching Assistants. Students' written comments provide similar information. For example, "Availability of Prof & TA is good" "Office hours & e-mail help a lot; lots of communication with students," "very approachable, very positive attitude."

Students wanted more opportunities to practice analysis and evaluation. In their written comments, students requested more time in class to practice solving problems similar to those in their homework assignments. For example: "More interaction, but not as intense/involved as lab" and "More interaction w/ lecture notes prior to class, so we can expect more out of lecture."

### Changes

One change I plan to make in this course is to decrease the amount of time I spend lecturing and provide time at the end of each session for student questions. Rather than solving every derivation in class, I will leave a portion of it incomplete and revisit it during the next class when I will ask students to help complete the solution. A number of the topics covered in this course are particularly challenging for students, thus I will occasionally provide opportunities for students to work tough problems in class, when the TAs and I are there to provide guidance.

Angela R. Linse, Ph.D.

Schreyer Institute for Teaching Excellence, Penn State

<http://www.schreyerinstitution.psu.edu/>