Instructor M. Stob  
Office NH 279  
email stob@calvin.edu  
Phone x6-7114, 949-8170 (home, before 11 PM)  
Office Hours most afternoons from 1:30–3:00, drop in any time I am around  
Text *Applied Statistics for Engineers and Scientists*, De Vore and Farnum (second ed.)  
Website [www.calvin.edu/~stob/courses/m241/S11](http://www.calvin.edu/~stob/courses/m241/S11)  
Exam Wednesday, May 18, 1:30PM

**Course Goals**

1. Students will understand basic concepts of experimental design and their role in answering engineering questions.

2. Students will be able to choose appropriate graphical and numerical techniques to summarize univariate data and to describe the relationship between two variables.

3. Students will be able to choose an appropriate probabilistic model in several situations (such as modeling measurement error).

4. Students will be able to construct confidence intervals for parameters of several probabilistic models.

5. Students will be proficient in the use of a standard statistical package.

6. Students will be able to state the underlying assumptions of the particular probabilistic models used in the course and explain the role that such assumptions play in probabilistic models generally.

7. Students will be able to read journal articles that rely on statistical methods, to explain these methods, and to evaluate the appropriateness of the use of those methods.

**Course webpage** The course webpage will have important notices, electronic copies of every class handout, an up-to-date homework schedule, and many resources for using R. You should check this page often.

**Homework** Besides reading assignments, homework will be assigned daily. Homework assigned during a week will normally be collected on the following Thursday. Pay attention to the homework schedule posted on the course webpage. No late homework will be accepted for any reason but one homework assignment may be missed for any (or no) reason without penalty.

**Tests** There will be one take-home, open-book test due on or about March 31.

**Projects** There will be two or three small projects. Some or all of them may be group projects. The first one will be due Tuesday, March 1.
**Final Exam**  The final exam will have a relatively short in-class portion that will be given at the time listed above. A take-home portion of the exam will be due on Wednesday, May 18, at 5 PM.

**R**  Almost every homework assignment as well as the tests and exam will require the use of R, the statistical software package. We will use R over the internet so you should plan to do your homework using a computer with a reasonably fast internet connection.

**Collaboration**  It is perfectly acceptable to help each other. I encourage you to work together on any assignment unless I explicitly say otherwise. Of course academic honesty and common sense require that only honest effort on your part be rewarded; do not turn in “joint” work which is really only the work of someone else. However you do not have to feel guilty turning in work that reflects mostly the good ideas of someone else if you were genuinely working together. You should always indicate who you collaborated with on any work. Failure to do this is a form of academic dishonesty.

**See Me**  If you are having trouble with the course, if you don’t understand something important, if you have some special circumstance that is getting in the way of performing well in this class, or you just want to talk about the course, see me. While I have office hours, I encourage you to come see me anytime that I am in my office. While I check email regularly and will answer it promptly, email isn’t very useful for answering the more technical questions that might come up in homework. Also, don’t assume that just because you are awake and writing email that I am awake and reading email!

**Attendance**  I do not require attendance or make attendance any part of the grade. If you miss class for any reason however, you are responsible for determining what you missed. The outline handed out each day will be posted on the web soon after class to help you determine that. Likewise I will try to post any handouts or important announcements. No reason for missing class excuses any late homework. I plan to start on time and end on time and common courtesy to your classmates suggests that you plan likewise. If you must come late or leave early (it happens), be as unobtrusive as you can and don’t make a habit of it.

**Disabilities**  Calvin will make reasonable accommodations for persons with documented disabilities. Students should notify the Coordinator of Services for Students with Disabilities located in the Student Academic Services office. Students requiring such accommodations should meet with me during the first week of class.

**Final Grade**  Your final grade \( F \) will be computed from your grades (suitably normalized) on the homework \( (H) \), projects \( (P) \), test \( (T) \), and final exam \( (E) \) by the following formula:

\[
F = .30E + .10H + .15P + .30 \max(E, T) + .15 \max(E, H)
\]

**Exceptions**  I reserve the right to make changes or exceptions to the above policies either for the whole class or for individuals. The ultimate goal in this course is learning and formal requirements should not unnecessarily stand in the way of this. As a consequence, if you (individually or collectively) think that any of the above conditions are interfering with learning, let me know and we’ll see what can be done.