

MATHS 335
Mathematical Models

Section: 001, 1:00 p.m., MWF, RB 117

Instructor: Kerry N. Jones (kerryj@math.bsu.edu)

Office: RB 473, 285-8658

Office Hours: MTWF, 2-3 p.m. and by appointment

Homework: problems will be assigned in conjunction with each section covered. You should work through these problems principally for the purpose of generating questions for class. Homework solutions will not be collected.

Projects: 4-6 projects will be assigned during the semester. These should be executed in small groups (3-4 students).

Presentation: each student must participate in presenting at least one project during the semester.

Tests: Two tests and a final exam. There may be take-home portions to these exams. The final may be entirely take-home.

Exam I: February 15 (in class)

Exam II: March 28 (in class)

Final Exam: Friday, May 2, 12:00 noon (comprehensive)

In-class tests are "closed book," take-home tests are "open book." No make-up tests. No missed tests without documentation of exceptional circumstances.

Text: **A Course in Mathematical Modeling**, (Mooney and Swift)

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| Grade: | Projects | 15% |
| | Presentation | 10% |
| | Tests | 20% each |
| | Final | 35% |

(or, if a test was missed, 20%, 10%, 30% and 40%)

One or more grades may be curved to compensate for an exceptionally difficult test.

Attendance Policy: class attendance is expected, as is class participation. There will be no formal penalty for missing lectures, other than the fact that if it is a chronic problem, slack shall not be cut for you when test time arrives. I will concentrate my efforts on those students who are putting forth significant effort of their own. You have been warned!

Disabled Student Statement: If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible. My office location and hours are listed above.

Course Withdrawal: The withdrawal period is Saturday, January 12 through 4pm Monday, March 17. During this period students can elect to receive a "W" for the course by completing and submitting the proper form. The instructor's permission is not required. For details, see page 19 of the current Undergraduate Catalog.

What Every Freshman Math Student Needs to Know

adapted from Steven Zucker's "Teaching at the University Level"

1. **You are no longer in high school.** The great majority of you, not having done so already, will have to discard high school notions of teaching and learning and replace them by university-level notions. This may be difficult, but it must happen sooner or later, so sooner is better. Our goal is more than just getting you to reproduce what was told to you in the classroom.
2. Expect to have material covered at *two to three* times the pace of high school. Above that, we aim for greater command of the material, especially the ability to apply what you have learned to new situations (when relevant).
3. Lecture time is at a premium, so it must be used efficiently. You cannot be "taught" everything in the classroom. **It is *your* responsibility to learn the material.** Most of this learning must take place *outside* the classroom. You should be willing to put in two hours outside the classroom for each hour of class.
4. The instructor's job is primarily to provide a framework, with *some* of the particulars, to guide you in doing your learning of the concepts and methods that comprise the material of the course. It is not to "program" you with isolated facts and problem types nor to monitor your progress.
5. You are expected to read the textbook for comprehension. It gives the detailed account of the material of the course. It also contains many examples of problems worked out, and these should be used to supplement those you see in the lecture. The textbook is not a novel, so the reading must often be slow-going and careful. However, there is the clear advantage that you can read it at your own pace. Use pencil and paper to work through the material and to fill in omitted steps.
6. As for *when* you engage the textbook, you have the following dichotomy:
 - a. [recommended for most students] Read for the first time the appropriate section(s) of the book before the material is presented in lecture. That is, come prepared for class. Then the faster-paced college-style lecture will make more sense.
 - b. If you haven't looked at the book beforehand, try to pick up what you can from the lecture (absorb the general idea and/or take thorough notes) and count on sorting it out later while studying from the book outside of class.
7. **Ask questions in class.** Even if it appears as though everyone else is "getting it," chances are that they are actually about in the same position as you and will appreciate, not resent, your question (providing, of course, that you are prepared enough to ask a vaguely reasonable question).
8. **Study with other students in the class.** This greatly decreases your chances of "learning the material wrong" and gives you the opportunity to explain what you know to others, which greatly clarifies your knowledge.