

# Syllabus

Math 125 (Introductory Statistics) Kovitz Spring 2025

**Course Description.** For non-science and non-mathematics majors only. This is a first course in introductory statistics, which will prepare students to do the standard calculations without cumbersome notation and without heavy reliance on mathematical formulas. Instead emphasis will be placed on teaching how to think statistically. The topics include introductory statistics, covering descriptive statistics including correlation and regression; introductory probability and sampling theory sufficient to enable development of inferential statistics; and inferential statistics.

**Text.** *Statistics*, Freedman/Pisani/Purves, fourth edition. It is absolutely required that you get a hard or electronic copy of this text as we will follow it very closely and use it for a few homework assignments. Daily class worksheets will be used to make the lecture easier to follow and generally improve the in-class experience. Combining them with careful reading of the text should provide a solid instructional foundation.

**Web Site.** Many of the documents necessary for the course are accessible through the Mathematics Department web site on:

[www.cs.umb.edu/~skovitz/math125](http://www.cs.umb.edu/~skovitz/math125)

Course information and schedules, homework assignments, definition-concepts-formula lists, and topic lists and suggested problems to study are on the web site.

Get practice tests and quizzes. Get extensive practice for our final and for old finals going back to 2006.

Definition-concept-formula lists and Chapter Guides are very important supplemental material. Definitely consult them for each chapter.

*Readings* are posted on the web site. They will tell you what to read for each class and suggest some problems in the text to look at.

(The chapter guides are useful because the text is very wordy and it's hard to know what is important or emphasized, and the homework problems, though usually interesting and challenging, are often tricky.)

Chapter Problems are examples to use if you get stuck on a homework or a test practice.

Homeworks will be posted on the course website. Each will have a specific time allotted for completion. WeBWorK homeworks will be available through Canvas; for all other course material, use my web site. The assignments that count for your course grade are those seventeen posted on the course web site and the two Check Tests given out on January 27 and January 29 in class. **Not completing at least ten of the seventeen written assignments or at least eight of the fourteen WeBWorK assignments will greatly increase your chance of failing the course.**

All worksheets will be distributed in class to use in the class. They will also be posted on the web site.

**WeBWorK Assignments.** Additional assignments will be provided on WeBWorK, accessible through Canvas. These are provided to allow you to practice with problems that provide immediate feedback as to whether your answer is correct. Use them to get ready for the hand-in assignments that count 1% each. **Grades that accumulate on Canvas will be counted as a back-up, alternate homework grade for the semester, so do them right along. WeBWorK assignments can never be accepted beyond the due date. If you want a decent WeBWorK grade, do almost all the WeBWorKs on time.**

**Calculators.** You should get a calculator with a  $y^x$  key and a factorial (!) key. Tests will be given that virtually require the use of such a calculator. Any such calculator will be sufficient, but if you do not have one already I recommend the Casio *fx-260solar* because it simplifies calculation of the average and standard deviation. Be careful: the statistical calculator sold in the Campus Bookstore does not work for our course.

**Instructor.** Sheldon Kovitz

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Office Hrs.: Mon. 12 noon to 12:40 pm; Wed. 1–1:40 pm; Fri. 12 noon to 12:40 pm, starting March 28. Zoom appointments are available at other times.

No office hours on March 14 and April 14.

**Policy on Attendance.** Perfect attendance is strongly recommended to keep current with the work. The attendance will be taken with a sign-in sheet and the homework will be collected on due dates. In case of a transportation delay, snow emergency, or a personal emergency keep in mind that it is better to come in late than to miss class entirely. If you miss three classes in a row, I will assume that you have dropped the course. Should an emergency arise, please email me at sheldon.kovitz@umb.edu.

**Students who have five or more unexcused absences throughout the semester will have a lessened chance of passing the course.**

**In Class.** Be sure to ask for the handouts each day and to sign the attendance sheet. A major accomplishment to be evaluated in the homework grade will be promptness. Do the assignment even if you cannot complete it. The lowest seven homework grades will be dropped. For that reason do not fret if circumstances prevent you from doing a hand-in assignment or two.

**Grades.** The course grade will be determined by the following:

One three-hour (closed-book) common, multiple-choice final exam: 36% of course grade

Three 50-minute tests: 18% each—54% of course grade

Written homework assignments (best ten): 1% each—10% of course grade

Algebra and Logic Check Homeworks: a *bonus* of 1/4% each

6 bonus quizzes: each a *bonus* of 1/2%: 3% in total.

Total bonus available and added on to final course average: up to 3 1/2%

The minimum averages for the various letter grades are:

A or A—/ 90; B+, B, or B—/ 80; C+, C, or C—/ 70; D+, D, or D—/ 60.

**Tests.** The final examination will be given on Friday, May 23, from 3 to 6 p.m.

**No exceptions: final must be taken with the class.**

**Leave Friday, May 23, from 3 to 6 pm, free for the final.**

**Do not miss class on Friday, March 14. Test 1 will be given.**

Tests are now scheduled for Friday, March 14; and Monday, April 14; and Friday, May 9. Six quizzes are scheduled for various classes (see the schedule on the web site for the exact days). The Algebra and Logic Check Homeworks will each be given out in the first two classes, and each is due at the following class. All dates are subject to change; make sure that you find out the exact date of each test.

Make-up tests will generally not be automatically granted. In the case of an official excuse, such as a medical excuse from a proper source, I will grant a makeup. If you anticipate something and let me know a week before, I might be amenable to giving you a substitute test before the scheduled date. There are other reasons such as jury duty, religious observance, or bereavement that will deserve a makeup if properly documented. Missing a test with no makeup will drop your course grade from A to C; B to D; C to F.

If you miss a test for a valid reason, you must go to the Dean of Students and submit your excuse. Only then, can I truly be fair in deciding who gets a makeup exam and who does not.

Show your work on all tests; otherwise it is impossible to give partial credit if the final answer is wrong.

**The Algebra and Logic Homeworks are mandatory. Any student who does not submit both of them will have an automatic F for the course. No exceptions.**

**Bonuses for Good Attendance and Punctual Homework Assignments.** There will be huge bonuses, determined by precise formulas, for each class not missed and each homework assignment handed in. The minimum of these two bonuses will be applied, especially to a student whose course grade would otherwise be lower than C–, to raise the grade one or two notches. In some cases good attendance and doing all the homeworks could raise a grade even more.

Therefore, it is important that you turn in the assignment in a timely fashion by the day that it is due. Do not wait until the next day; it will be marked late. Even if you complete only half the assignment, you will be given credit for a punctual assignment. If the score is poor, it is possible that the grade will later be dropped. Seeing this poor score when you made a serious effort is in itself a learning experience, warning you that as yet you don't really understand the material.

**The Grade of Incomplete.** The grade of incomplete is rarely given in the Mathematics Department, and only in cases where a student who would otherwise pass has missed a *small* portion of the course work because of unavoidable circumstances. In that case the missed work must be made up according to a prearranged schedule, agreeable to the instructor and student. Generally that will require making up the work by the end of the next term. Failure to adhere to the schedule will automatically change the grade of Incomplete to F.

**Tutoring and Review Sessions.** Vaishnavi, an experienced tutor, is available to help you in the Tanimoto Center at the Math Department: Wheatley 3rd floor, room 154. Appointments are available as well as walk-in services. A schedule will be available giving the times that Vaishnavi is available at the Center.

In addition, free tutoring should be available through the CAE tutoring program, on the 8th floor of Healy Library. Please email Subject.Tutor@umb.edu, or visit the CAE on the 8th floor of the Healy Library or in the Campus Center, first floor, room 1300. This help often resolves difficulties in the course if it is used early enough. A student doing D or F work must seek help immediately if he or she hopes to pass the course. Most others are also likely to benefit and should not hesitate to get help. Sign up for this service on line or in person. You get two half-hour private sessions per week. This is in addition to any time you spend at the Tanimoto Center.

If your schedule permits, always favor the Tanimoto tutor over the CAE tutor; she has been trained by, and is supervised by, your instructor.

**Policy on Honesty.** It is the instructor's intent to enforce the University policy on honesty. Copying from prohibited sources including from other students during a test or quiz will result in a zero for both the person who copies and the person who allows it. It also could result in an automatic F for the course or a more severe penalty.

Working together with another student on a homework assignment is encouraged and is not considered cheating. Copying the entire assignment will not be acceptable. Signing another's name to the attendance list is improper conduct and will be dealt with harshly.

We will have an implied code of honor. If you see another student cheating, let me know confidentially of that fact. In the past, it has been through student vigilance that those who abuse the system have been stopped. It is very unfair to the others for any student or students to cheat on final exams, tests, or quizzes and we shall not tolerate it.

**Complaints.** All complaints about the course should be directed to the course instructor. If he cannot resolve it, the next level is the Committee of the Lower Division in the Department of Mathematics.

Do not start a complaint with the Dean of the College or higher.

**General Education Distribution.** This course satisfies the requirements for a general education distribution course. More than two-thirds of the course content is college-level mathematics. It has as a goal to develop several competencies. The first is quantitative reasoning: working and reasoning with numbers. This is the math part of the course. In reality this course is not very “mathy,” because other competencies are emphasized. The second is critical thinking and verbal reasoning. Logic will play a large role in this course, particularly in the study of probability. A third competency is critical reading. So the fact that the book is somewhat difficult to read is an essential part of the course. You will often have to read a chapter two or three times to understand it. Be sure to use the lists of key parts (under Reading on our web site) to decide where in the chapter to put the extra time. The last competency is cooperative work. This is accomplished by working on the homework with another student or a group.

**Disability Services.** The Ross Center provides services for students with disabilities. It is located in the campus center, on the upper level, Room 211, telephone 617-287-7430. It can provide such things as extended times for tests, note takers, adaptive computing. Any student with a documentable learning, physical, or mental disability should be in touch with the Ross Center. They will set up a plan to provide accommodations to ensure effective communication access and needed support services.

**General Comments.** All students are encouraged to see me in my office. If posted office hours are inconvenient, I will gladly try to arrange an appointment to meet in the afternoon of a class day, after 12 noon. I am also available for appointments on Zoom on Sundays, Tuesdays, Thursdays, and various evenings.

Should you have a complaint or a suggestion, let me know privately. Many good ideas from students could improve the course. Often they come too late to benefit those taking it this term. I am always open to comments or criticism and promise not to lower your grade if you have a complaint.

Two suggestions from a previous semester have been implemented and will surely make things easier in this course.

If you are absent, please make sure you still do the homework on the due dates. Don't fall behind. Being two days behind and doing well might result in a failing grade. Missing assignments just means that you have more work to make up later.

**Please come on time to class. It is important.**

If you are a few classes behind on your work, please have the courtesy not to ask too many questions in class on material covered in the lectures you missed. Rather see me in my office for specialized help. This is in no way intended to discourage the asking of questions at the beginning of class on the previous day's work. No question is silly if it is well intentioned.

The material will be presented in a challenging, thought-provoking, and interesting manner. Careful and regular preparation of 2 to 4 hours for each class is essential. Furthermore, the latter parts of the course depend heavily on techniques covered earlier.

In recent years, as a sign of the times, there has been a tendency on the part of an inconsiderate minority to talk in class and disturb the concentration of other students. This will not be tolerated. That would also distract the instructor and force him to repeat himself unnecessarily and waste time. Also please turn off the ring tone on your cell phone during the lectures and tests. And if you must eat in class, eat quietly. Please respect the institution and help us assure that all will get full value for their tuition.

My policies do not include any scaling of grades. For that reason you should freely assist your fellow student as a gesture of good will. Cooperation cannot hurt your grade and might end up helping both of you. A good idea is to get yourself a “study buddy.” **If you feel uncomfortable, do not share your private information, such as cell phone number, with your study buddy. Instead use the UMass email account for communication.**

**Come on time, and turn off cell phones and pagers.**

Good luck. Learn well and enjoy.