MATH 155, *Modern Statistics with Computer Analysis*
The Course and Its Policies

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Office Times
10:00 - 10:50 a.m., Monday through Friday
Other times by appointment (don't hesitate to ask for one)

The Subject

Probability is the mathematical theory of random phenomena. **Statistics** is a theory of information that has inference – that is, the drawing of conclusions – as its objective. Statistics employs the concepts of probability in its theory and practice. In this course we will study those aspects of statistics that are fundamental to the making of decisions in today's world.

There are three skills that are essential to achieving success in solving statistical problems. They are **recognition**, **computation**, and **interpretation**. **Recognition** is the act of translating the everyday language of a problem into mathematics (in our case, probability). **Computation** is the act of performing the calculations required to solve the resulting mathematical problem. **Interpretation** is the act of translating the mathematical results back into the language in which the problem was originally stated.

(For more information about the objectives and content of the course, see the syllabus.)

A Note of Critical Importance

This course will not be conducted by the traditional "lecture" method (see the figure on the next page). Instead, the focus of almost every meeting of the class will be the presentation, by other students and you, of solutions to homework problems. I will make assignments; introduce topics; and, sometimes but very infrequently, lecture. You will work on the assignments outside class. Together in class, we will discuss assignments. I will provide hints or solutions whenever there seems to be no better way for our study to proceed. An approach such as this demands, for the success and enjoyment of everyone, diligent, deep, and consistent work and play with the material of the course *by* everyone. This means your devoting to your homework a minimum of six hours during each week of the semester. I recommend strongly that the homework time be apportioned into at least three sessions, at least one between each two meetings of the class. If you are unwilling or unable to make a commitment of this sort, then you should drop this section of the course.
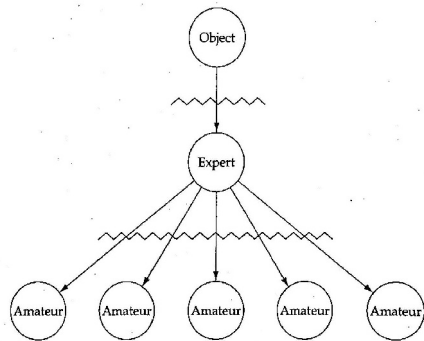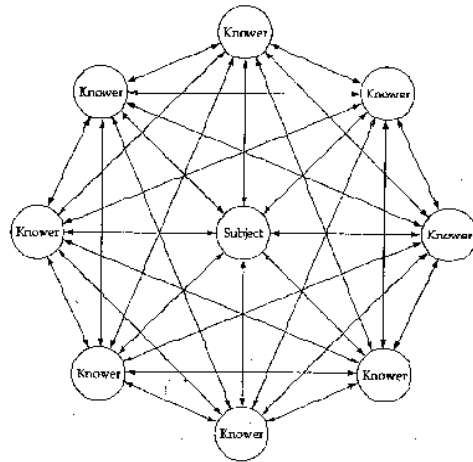
(1)[1] (2)[2]

Figure. Learning by (1) Lecture and (2) Inquiry.

Administrative Matters

Evaluation of Your Work. Your performance in the course falls into four categories: "quizzes/homework/lab work," a written project, three tests, and the comprehensive final examination. I will handle homework and quizzes primarily by observing your work in class, but also by collecting and grading some solutions to problems and possibly administering one or more (probably unannounced) quizzes. The total of all of this work will count as $h\%$ of your final average, where h will be defined below.

Your homework and class participation will be graded by the following method. Each day of class will serve as an opportunity for you to "show your stuff." If you miss a class, you will receive a score of 0; if you attend class, you will earn at least a 1. If you make a comment from your seat during that class, your 1 will be replaced with a 2. If you present something at the front of the classroom (even if it's incorrect) or make a particularly good comment from your seat, your score for the class will be recorded as a 3. Finally, if you do an exceptional job in front of the room or offer a stunning insight from your seat, you will earn a 4 for your day's score. I will employ this same scoring system on any homework that I ask you to turn in for a grade. At any time during the term when either you or I desire to know your grade-point average in homework and class

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1. Parker Palmer, *The Courage to Teach* (San Francisco: Jossey-Bass, 1998) 100.

2. *Ibid.*, 102.

participation, I will compute the average of all such scores that you have earned to that point. An average of 1.000 earns you a *D* in the homework category; a 2.000 earns a *C*; a 3.000, a *B*; and a 4.000, an *A*.

The project will be explained later during the semester. It will count as *p*% of your final grade.

There will be three tests. I will drop the lowest of these scores and count the average of the remaining two as *t*% of your final average, where *t*, like *h* and *p*, will be defined in the next paragraph.

The final examination will count as *e*% of your final average in the course. The numbers *h*, *p*, *t*, and *e* must be numbers satisfying the following conditions:

$$15 \le h \le 25; \ 5 \le p \le 10; \ 40 \le t \le 60; \ 20 \le e \le 40;$$

and

$$h + p + t + e = 100.$$

NOTE: NO WORK OF ANY SORT, OTHER THAN THE FINAL EXAMINATION, MAY BE TURNED IN FOR A GRADE AFTER THURSDAY, DECEMBER 3, 2015.

The grading scale for the course is as follows:

$$90 - 100, A;$$
$$80 - 89, B;$$
$$70 - 79, C;$$
$$60 - 69, D;$$
$$< 60, F.$$

The Integrity of Your Work. The Salisbury University Promise, which most of you have publicly taken, says the following:

> As a Salisbury University student --
> I will connect what I learn to how I live.
> I will demonstrate personal and academic integrity.
> I will respect diverse groups and individuals.
> I will strive to bring honor to myself and the University.

I will hold you to that promise. By presenting or turning in a piece of work, you will be pledging that you have neither given nor received any unauthorized help[3] on the work. Cheating will be punished. The punishment might include, but will not necessarily be limited to, the following:

(1) Assigning you a score of *0* on any offending work;
(2) Assigning you a grade of *F* for the course;

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[3] "Unauthorized help" includes plagiarism.

(3)   Reporting you to an appropriate authority.

Attendance. Regular attendance of class is an important part of this course. Nevertheless, because I believe that university students should make their own decisions, I hereby declare that attendance of the class meetings of this course is optional, subject to the following conditions:

(1)   The student and not the professor is responsible for the consequences of an absence. This means, for example, that I will not be obligated to repeat for an absentee material that has already been covered.

(2)   A test from which a student will be or was absent may be made up only when the absentee can convince me, preferably in advance, of the necessity and worthiness of the absence.

(3)   Homework that was assigned to be turned in and is late will not be accepted and will instead be assigned a score of 0.

Regarding Learning Styles and Difficulties. There are many styles of learning. Some people learn better with their eyes, some with their ears. Others have still other effective ways in which to acquire knowledge. If you have a learning style that does not seem to accommodate well to my method of teaching – in particular, if you have a learning disability – please let me know and we'll see what we can work out. Specifically, if taking notes in class is difficult for you or hampers your learning, arrangements can almost certainly be made to help you solve this problem.

Some Thoughts at the Beginning of a Semester

I want to help you learn. I will help you with any legitimate academic need. I will not do for you anything that you need to do for yourself. I want this course to be an enjoyable experience for all of us, and I will do all I can to make it so.

I am making certain assumptions about you. You have enrolled in this course of your own free will, if only to satisfy a requirement. You want to learn the material of this course, at least to the point of earning a passing grade. You are willing to work and study. *In particular, you will conduct yourself in accord with the principles set down in the paragraph, "A Note of Critical Importance", on Page 1.*

If at any time you would like to discuss this course or any other aspect of your life at this university, please come visit me. I would be happy to talk with you.

E. Lee May, Jr., Ph. D.
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