



MA 150 & ST 150

Contemporary Mathematics and Statistics Seminar

Semester: Fall 1999

Instructor: Richard Hitt, Professor of Mathematics

Office Hours: MWF 9:40 – 10:10, 11:00 – 11:30 and by appointment in ILB 306 (accessible through ILB 325).

Phone: (334) 460-6755 is a direct line into my office. If I am not in, you can leave a message on my voice mail. If you need to speak to a secretary, you should dial 460-6264 and press 0 (zero) at the voice prompt.

E-mail: My electronic mail address is hitt@mathstat.usouthal.edu. This is a good way to get in touch with me.

Web page: Visit <http://www.mathstat.usouthal.edu/hitt> and click on the course number. This will take you to the course web page.

Class Meeting: W 1:25 – 2:15 in ILB 430.

Text: The text for the course is *Life by the Numbers* by Keith Devlin.

Description: This course gives an overview of modern mathematics and statistics from the point of view of the practitioners. The course is designed for majors in mathematics and statistics at all levels as well as those students who are considering maths/stats as a major or minor area of study. Topics usually included are elements of geometry, algebra, analysis, methods of statistical inference, the role of the computer in the analytical sciences; these topics vary from semester to semester. This course cannot be taken for credit simultaneously with ST 150, but may be repeated in different semesters.

Objective: The goal of the course is to give students an enjoyable and non-threatening introduction to advanced topics in mathematics and statistics. We examine what analytic scientists do and how they do it.

Grading: Attendance and participation are important ingredients of the course grade. Students will also provide written individual and group reports on the topics covered.

Regular Sections: The course grade is weighted as attendance and participation (40%); written summaries and reports (40%), and a final exam (20%).

Honors Sections: The course grade is weighted as attendance and participation (30%); written summaries and reports (30%), short term report on a topic selected in consultation with the instructor (25%), and a final exam (15%).

Audit: If you are auditing the class, you will receive a grade of UA (unsatisfactory audit) if, in the judgement of the instructor, you do not consistently attend class.

Note: Any student with a qualified handicap which requires accommodations should talk with the instructor after class so that arrangements can be made. A student must verify that he/she has a qualified handicap through the Special Student Services Office (460-7212).

References

- [1] Edwin Abbott. *Flatland*. Buccaneer Books, 1988.
- [2] Eric Temple Bell. *Men of Mathematics*. Touchstone Books, 1986.
- [3] John H. Conway and Richard K. Guy. *The Book of Numbers*. Springer Verlag New York, Inc., 1996.
- [4] Richard Courant and Herbert Robbins. *What is Mathematics*. Oxford University Press, 1996.
- [5] Keith Devlin. *Mathematics: The New Golden Age*. Penguin USA, 1991.
- [6] Keith Devlin. *Mathematics: The Science of Patterns*. Scientific American Library, 1997 (Second Printing).
- [7] Keith Devlin. *Life by the Numbers*. John Wiley & Sons, 1999.
- [8] William Dunham. *Journey Through Genius: The Great Theorems of Mathematics*. Penguin USA, 1991.
- [9] William Dunham. *The Mathematical Universe*. John Wiley & Sons, Inc., 1994.
- [10] G. H. Hardy. *A Mathematician's Apology*. Cambridge University Press, 1992.
- [11] Stefan Hildebrandt and Anthony Tromba. *The Parsimonious Universe*. Springer Verlag New York, Inc., 1996.
- [12] Konrad Jacobs. *Invitation to Mathematics*. Princeton University Press, 1992.
- [13] T. W. Korner. *The Pleasures of Counting*. Cambridge University Press, 1996.
- [14] Henri Poincare. *Science and Hypothesis*. Dover Publications, Inc., 1952.
- [15] Ian Stewart. *Natural Numbers*. BasicBooks, 1995.
- [16] Ian Stewart. *From Here to Infinity*. Oxford University Press, 1996.