

Professor Robert Gross
MATH1180.01: Principles of Statistics for Health Sciences
230 Fulton Hall, MWF Noon
Spring, 2017

OFFICE: 515 Maloney Hall, 617-552-3758

OFFICE HOURS: Monday, Wednesday, and Friday, 1–3; and by appointment.

E-MAIL: gross@bc.edu

CLASS HOME PAGE: <http://fmwww.bc.edu/gross/MATH1180>

REQUIRED TEXT: *Principles of Statistics for the Health Sciences*, spring 2017 edition, by Jenny Baglivo

REQUIRED CLASS NOTEBOOKS: *MATH1180 Notebooks 1–4*

RECOMMENDED COMPANION TEXTS: Three recommended textbooks (*Principles of Biostatistics*, by Marcello Pagano and Kimberlee Gauvreau; *Statistics: The Art and Science of Learning from Data*, by Alan Agresti and Christine Franklin; *The Practice of Statistics in the Life Sciences*, by Brigitte Baldi and David S. Moore) are on reserve in O’Neill Library and are available in the CFLC.

Required class materials (a total of 5 packets) are available at the bookstore. Readings from the required textbook will be assigned throughout during the semester. The four required notebooks contain all the lecture materials, with room to fill in solutions to problems and other notes. The notebooks also tell you where you can find similar readings in the three recommended textbooks.

Exams, Homework, and Grading

The examination schedule is:

Date	Material from required text
Monday, February 13	Chapters 2–4
Monday, March 20	Chapters 4 and 5
Friday, April 21	Chapter 5 and 6
Final: Tuesday, May 9, 4PM	Chapters 1–6

Your final grade will be a weighted average of three in-class examinations (weighted 16%, 18%, and 20% respectively), written homework and class participation (12%), and the comprehensive final examination (34%) on Tuesday, May 9 at 4PM.

There will be *no makeup examinations* without a medical excuse. If you have a serious reason for missing an in-class exam, then you must let me know *before* the examination time. If you have a serious reason for missing the final exam, then you must inform the Dean’s office *before* May 9 at 4PM. (The Dean’s office will then let me know that you will miss the exam.)

NOTE: If you have three final examinations scheduled for May 9, then you may take our final examination on Monday, May 15, at 4PM.

Homework

There will be about ten written problem sets. While I expect that students will discuss homework problems with their colleagues, each student must submit his or her own work. You must submit your homework *on time*, at the start of class. You must *staple* multiple sheets together. Ripped, folded, and torn sheets will not be receive any credit.

Academic Integrity

Academic integrity is central to the mission of higher education. Please observe the highest standards of academic integrity in this course. Please review the standards and procedures that are published in the university catalog and on the web, at:

<http://www.bc.edu/integrity>

Make sure that the work you submit is in accordance with university policies. If you have any questions, please consult with me. Violations will be reported to the Deans' Office and reviewed by the College's Committee on Academic Integrity. This could result in failure in the course or even more severe sanctions.

About This Class

MATH1180 introduces statistics as a liberal discipline, and applies the principles of statistics to problems of interest to health sciences professionals. It serves primarily as the Mathematics Core course for students in the Connell School of Nursing (CSON), and secondarily as preparation for research methods courses given by CSON faculty.

The order and selection of topics have been chosen to give you a solid understanding of the principles of statistics. The major topics are study design principles, numerical and graphical summaries of data, probability theory, statistical inference, analysis of two samples, and analysis of association.

Tentative Schedule

<i>Dates:</i>	<i>Topics:</i>	<i>Text sections:</i>
Jan. 18, 20, 23, 25	Design principles	2.1–2.6
27, 30, Feb. 1, 3	Data summary	3.1–3.8
3, 6, 8	Introduction to probability	4.1, 4.2.1–4.2.2
10	Overview	
13	First examination	
15, 17, 20, 22, 24, 27, Mar. 1, 3	Probability theory	4.1–4.6
Mar. 13, 15	Sampling distributions	5.1–5.2
17	Overview	
20	Second examination	
22, 24, 27, 29, 31, Apr. 3, 5, 7, 10, 12	Statistical inference	5.1–5.7
19	Overview	
21	Third examination	
24, 26, 28, May 1, 3	Analysis of two samples	6.1–6.4
Tuesday, May 9, 4PM	Comprehensive final examination	

Miscellaneous

The Mathematics Department provides tutoring on a walk-in basis in Maloney 560. The tutoring service usually begins during the second week of classes; the schedule is posted on the door. Tutoring for MATH1180 might also be available through the Connors Family Learning Center, O'Neill Library. You must make an appointment in advance with one of the MATH1180 specialists.

If you are a student with a documented disability seeking reasonable accommodations in this course, please contact Kathy Duggan (617-552-8093, dugganka@bc.edu) at the Connors Family Learning Center regarding learning disabilities and ADHD, or Paulette Durrett, (617-552-3470, paulette.durrett@bc.edu) in the Disability Services Office regarding other types of disabilities, including temporary disabilities. Advance notice and appropriate documentation are required for accommodations.