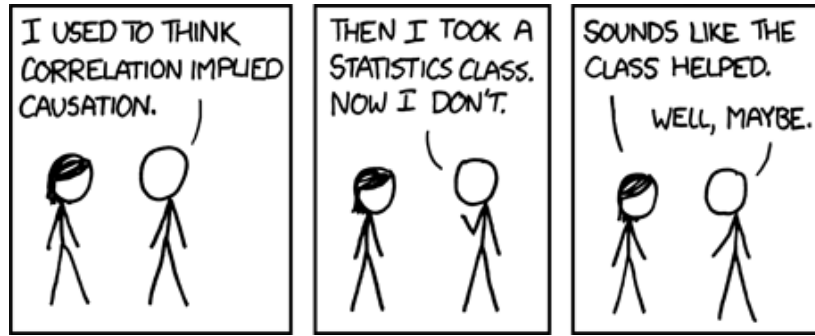


MATH 52: Introduction to Statistics, CMC, Fall 2013



(Source: <http://imgs.xkcd.com/comics/correlation.png>)

Time and place:	MWF 8:00-8:50am, Robert Hall North 104
Instructor:	Guangliang (Gabriel) Chen
Office:	211 Adams Hall
Phone:	(909) 607-8526
Email:	gchen@cmc.edu
Webpage:	http://www.cmc.edu/pages/faculty/GChen/
Office hours:	1-2 pm M, 2:30-3:30 pm W, 3-5 pm F and by appointment. Additional office hours will be held before each exam.
Sakai:	This is the official course site. It is a good source for all class-related information; in particular, it will be used for posting homework assignments, recording course grades, and sending announcements. Please check it regularly.
Textbook:	<i>Introduction to the Practice of Statistics</i> , 7 th edition (2010), authors: Moore, McCabe, & Craig, publisher: W.H. Freeman.

Course Description

This 1-credit course introduces techniques of statistical inference and methods of data analysis from a mathematical point of view. Emphasis will be placed on understanding the core concepts and ideas introduced in the course. Math 52 cannot be used as a substitute for Psychology 109 in the requirements for the Psychology major.

Course Objective

Through this course you will develop the following general skills:

- Data visualization and reporting
 - Statistical thinking and reasoning
 - Statistical programming
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Materials to Be Covered

The following sections of the textbook will be covered in this course:

1.1–1.3, 2.1–2.5, 4.1–4.5, 5.1–5.2, 6.1–6.4, 7.1–7.3, 8.1–8.2, 9.1–9.2, 10.1–10.2.

(The last one or two chapters may be skipped if there is not enough time.)

Software Requirement

We will use the statistical software R to do routine computations and assist with teaching/learning. R is a powerful, free software environment specially designed for statistical computing and graphics. It is installed on all the lab machines in Adams Hall. It can also be downloaded from <http://www.r-project.org/>. You are *strongly* encouraged to use R. However, if you decide to use an alternative (such as a graphical calculator or Excel), you are responsible for learning on your own how to perform advanced tasks as the course progresses.

Class Guidelines

- The class starts on time, so please do not be late.
 - Please make sure to turn off or mute your cell phone during class.
 - Please do not perform activities that are irrelevant to the course or distracting to other people.
 - Academic dishonesty at any level is not tolerated and will be reported to the College (per its policies) which may result in failure of the course and possible academic suspension.
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Grading Policy

Class attendance and textbook reading are required parts of the course.

Attendance will be checked in five unannounced classes during the semester. If you miss two classes at most, you will be eligible for bonus points (see the section Bonus Points Opportunities below).

Participation in classroom discussions is highly welcomed and encouraged, as it is an important way to gain a deeper understanding of the statistical concepts and ideas.

Homework assignments, with their due dates (normally on Fridays, but there will be exceptions), will be regularly announced in class and also posted on Sakai. Late homework will not be accepted, however, your lowest two scores will be dropped.

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A take-home quiz will be given after we finish each chapter (unless there is an exam following the chapter). It is open book and notes. You may also use the internet and a calculator, but you cannot ask people for help or offer help to other people.

There will be two in-class midterm exams and the comprehensive final exam. Here is the exam schedule.

- Midterm 1: Wednesday, October 2, in class
- Midterm 2: Wednesday, November 13, in class
- Final Exam: Monday, December 16, 9:00am – noon, in class

The exams are closed-book, but calculators are allowed.

Show all your work to receive full credit in both homework and tests. Correct answers without supporting steps may receive zero credit.

Make-ups for midterm exams will only be given with documented CMC-approved excuses. The final exam cannot be rescheduled by the instructor for any reason. See Academic Policies and Procedures at <http://catalog.claremontmckenna.edu/>.

The scales used will be as follows:

- Homework: 50
- Quizzes: 100 (20 each)
- Midterm 1: 100
- Midterm 2: 100
- Final: 150

Thus, the maximum possible total score is 500.

At the end of the semester I will introduce a curve based on the overall performance of the class to assign course grades accordingly.

Study Groups

You are strongly encouraged to form study groups of 2 or 3 people each, so that you may learn from each other and collaborate on homework (but you must write independent solutions). You will receive bonus points by simply joining a group and additional bonus points if your group as a whole makes “enough” progress between two consecutive exams (i.e., midterm 1 - midterm 2, or midterm 2 – final; see below for specific rules). Please form study groups freely, and be sure to email me your group affiliations by Monday, September 30 (after this deadline you will not be allowed to join a group or change your group affiliations).

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Bonus Points Opportunities

Bonus points are available if you meet any of the following conditions:

- You earn 10 points if you pass the attendance check four times (or more) out of the five, 5 points if you pass three checks out of the five, and none otherwise.
 - You receive 5 points if you join a study group, another 5 points if your group improves its average class rank by more than one from midterm 1 to midterm 2, and another 10 points from midterm 2 to the final exam (under the same criterion).
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Tutoring Services

The department provides free tutoring help to people who enroll in this course. The location is Math & CS Commons Room, Adams Hall 209. Regular tutoring hours are usually Sunday through Thursday, 8:00 - 10:00 pm, starting the second week of every semester and through the last day of classes. For more details including the schedule, see <http://www.claremontmckenna.edu/math/tutoring.asp>

Special Accommodations

If you anticipate needing any special accommodation during the semester (for example you have a disability registered with the College, or you are an athletic student), please let me know as soon as possible.

Instructor Feedback

I strive to teach in the best way to facilitate your learning. To achieve this, it is very helpful for me to receive immediate feedback from you. As often as you like, please visit the Feedback link in Sakai and submit anonymous feedback. This feedback is sent directly to me via an anonymous form. Please submit constructive criticism about things you would like me to change, as well as positive feedback about things in the class you are happy with.

The instructor reserves the final right to interpret and make changes to the class policies that are stated in this course syllabus.