Please note that office hours, Teaching Assistant information and some of the dates listed in the following are subject to change.

Prof. Hans-Georg Müller
e-mail: mueller@wald.ucdavis.edu, Office hours: 4236 Mathematical Sciences Building (MSB), M 1-2, T 4-5, F 1-2, and by appointment.

Teaching Assistants:

Bitao Liu
e-mail: btliu@wald.ucdavis.edu,
Office hours: T 9-10.
Please address computing related and R questions primarily to Bitao.

Ci-Ren Jiang
e-mail: crjiang@wald.ucdavis.edu,
Office hours: M 4-5, F 11-12.

Class Meeting Schedule: MWF 2-3 in 202 Wellman
There are two discussion/lab sections: Tu 1-2 (A01) and 3-4 (A02). Both are held at 2020 Sciences Lab Building (SLB). Please attend the one you are enrolled into. For Jan 22 and Jan 29, A01 discussion is held at 166 Chemistry and A02 discussion is held at 1132 Bainer. There is a computing help session that is held every Tu from 2-3 at 2020 SLB, except for Jan 22 and Jan 29, when it is held at 73 Hutchison.

Every student is expected to attend four weekly class meetings (three lectures and the discussion/lab). If you cannot attend all four class meetings including the discussion/lab as scheduled for your section, this class is not for you. First lecture is on Monday, Jan. 7, 2-3pm, last lecture on Monday, March 17. There is no class on Jan. 21 and Feb. 18, due to UCD holidays.

Class e-mail and web site: The class web site is accessible via http://www.stat.ucdavis.edu/courses/ under STA 108. Some class materials and assignments will be sent via e-mail or posted on the class web site. It is your responsibility to check these regularly. If you do not regularly check your official UCD assigned e-mail address, please make sure you always forward your incoming mail from there to the address which you regularly check. The e-mails will also be archived. Homework solutions will be posted.

Objectives: This is a second course in Statistics. It is assumed that students are familiar with the course material covered in STA 13 or an equivalent class. Familiarity with the basics of hypothesis testing, normal distribution, t distribution, p values and t-values is assumed. The course provides an introduction to some of the most important statistical methodology being used today. Regression techniques are virtually applied everywhere where data are analyzed. The R package will be used
to facilitate the numerical calculations. The emphasis of the course is mostly on understanding the methodology and interpretation and less on the mechanics of the computations.

Topics: We will discuss the simple linear regression model, least squares estimation and inference, then basic linear algebra and the multiple regression model including the general linear hypothesis test, the use of indicator variables, diagnostics, and model selection and additional topics as time permits.

Computing: We will use the R package, which is widely used for statistical applications and offers up-to-date features for regression analysis, among many other analysis tools. The R package is open access, therefore free of charge, and it will allow you to implement state-of-the art regression analysis. You can run R on any PC (at home after you download and install it, or in a campus PC lab). The first discussion sessions will feature an introduction to computing aspects. We will also provide handouts with sample R code and output. Our handouts and instruction will be designed for running R on a PC/Windows system. Please address R and computing related questions primarily to the TAs.

Prerequisite: A one-quarter introductory statistics course, such as STA 13, 32, 100, 102, or consent of instructor.

Grading: Homework (10%), two Midterms (in-class, 20% each) and Final (in-class, comprehensive, 50%).

Exams: In-class midterms and final are closed book, limited notes exams (you can bring two pages, two-sided, with your own notes for the midterms and four pages for the final). You are required to work independently on homework, projects and exams. All in-class exams take place in the regular class room. An exam which you miss will be counted at 0 points. If you miss a midterm exam for a good reason, you may request in writing to be excused from that exam. Upon approval of this request, the missed exam will not count and instead the final exam will count proportionally more towards the grade. If you miss the final exam with an approved reason, you will be offered the opportunity to take an oral make-up exam.

Schedule of exams: Midterm I, Wed Feb 6; Midterm II, Wed Feb 27 (these dates are subject to change); Final, Saturday March 22, 3.30-5.30pm.

Homework: There will be weekly homework assignments. The assignments are due Wednesdays in class. Please take advantage of the Tuesday discussions to ask pertinent question for homework due the following Wednesday. It is essential that you look at and get started with the Homework well in advance of the Tuesday discussion so that you are prepared to ask relevant questions and will be ready to complete the assignments with little extra time needed. Re. computer output, you need to submit annotated cut-and-paste versions. It is required that each submitted output is accompanied by a narrative providing the interpretation of your results, even if this is not explicitly mentioned in the assignment. If you just submit output or numbers without annotation and interpretation, this will not accrue any points. So please do not submit any output that is not interpreted. Since the solution sets will be posted soon after the due time, we cannot accept late homework.