Contact Information

► Course Website
  • Accessible from http://dsp.ucsd.edu/~kreutz

► Instructor
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Course Textbook

- **Bayesian Reasoning & Machine Learning**
  David Barber, Cambridge U. Press, 2012

  Errata-corrected e-version is available at:
  [http://www.cs.ucl.ac.uk/staff/d.barber/brml/](http://www.cs.ucl.ac.uk/staff/d.barber/brml/)

- **Supplemental Texts**
  - *Probabilistic Graphical Models*, D. Koller & N. Friedman, MIT, 2009
Course Objectives (wish List)

- **Bayesian Probability theory**: A “inference calculus” for reasoning and decision making in uncertain situations and environments.

- **Graph Theory**: A tool for encoding and structuring interdependencies.

- **Graphical Models**: Graphs encoding *probabilistic* relationships and dependencies.
  - The use of Graphical Models, conditional independence and D-Separation for complexity management and knowledge encoding.

- **Inference** in Graphical Models (GMs)

- **Dynamical inference** and discrete-state Markov Models

- **Learning** probability models for inference in GMs.

- Inference based on *stochastic MCMC sampling*
Assumed Course Background

- It is assumed that students know the material from Linear Algebra and Probability **well**.
  - If you have taken ECE 174 and ECE 175A you should be well prepared for this course.

- Students should also know Matlab, or some other script-based programming language (Python, Maple, Mathematica …).
  - Again, ECE 174 and ECE 175A should be adequate preparation.
Course Performance Evaluation

30% Homework and Computer Assignments. 30% Midterm Exam. 40% Final Exam.

This breakdown is firm and non-negotiable.

- Homework and Computer Assignments are graded “A for Actual Effort”. You get full credit for turning assignments in on time, and if it is evident that you worked on all of the problems in good faith. You get partial (or zero) credit if you are missing problems or it is clear that no real good faith effort was expended in attempting to solve the problems and programming assignments. You get no credit if you turn in nothing. Note that the assignments are not corrected or graded.

- Midterm (30%) and Final (40%) are rigorously graded for correctness of derivations and results.

- The Final Exam is scheduled for Monday, June 9, 2014, 3-6pm. The Final date and time is firm and non-negotiable.
Student Collaboration & Cheating

- Students are allowed to **discuss** homework and programming assignments.
  - *Individual homework & programming write-ups must be turned in.*
  - Not understanding homework solutions will hurt you on the midterm and final exams, which together comprise 70% of the overall course grade.

- Exams are **closed notes and closed book**.

- **Aggressive administrative action will be taken against students caught cheating on exams or homework assignments.**
  - Students caught cheating will be **immediately reported** to the UCSD Academic Integrity Office.