

**Course Website**

Course materials will be posted on the course website:

<http://www.cs.princeton.edu/~smattw/Teaching/cos521fa17.htm>

**Course Staff**

Instructors	Office	Email
Matt Weinberg	<i>CS Building 317</i>	smweinberg@princeton.edu
Teaching Assistants		
Divyarthi Mohan	<i>CS Building 217</i>	dm23@cs.princeton.edu

**Lectures**

Class	Time	Place
Lecture	T/Th 3:00 - 4:20pm	McCosh Hall 62

**Office Hours**

Time	Place	Staff
Monday 3:00 - 4:00pm	CS 217	Divya
Tuesday 4:30 - 5:30pm	CS 317	Matt
Wednesday 5:00 - 6:00pm	CS 217	Divya
Thursday 4:30 - 5:30pm	CS 317	Matt

**Outline**

The focus of this class is on advanced algorithm design and related tools. One difference between “advanced” algorithm design and undergraduate classes is the use of advanced concepts like randomization and approximation, and the design of algorithms in “advanced” domains where the input may be erroneous, or not entirely given.

**Additional Reference materials**

- “Algorithmic Game Theory” by Nisan, Roughgarden, Tardos, and Vazirani;
- “Randomized Algorithms” by Motwani and Raghavan;
- “Online Computation and Online Analysis” by Borodin and El-Yaniv;
- “Probabilistic Method” by Alon and Spencer;
- “Approximation Algorithms” by Vijay Vazirani;
- “Design of Approximation Algorithms” by Williamson and Shmoys;
- “Spectral Graph Theory” by Chung;

**Grading**

There will be 3-5 PSets throughout the semester. In January, everyone must either complete a take-home final or do a term project (in groups of 2). Grades will be 60% PSets and 40% final (exam or project). See <http://www.cs.princeton.edu/courses/archive/fall15/cos521/projectnotes2015.pdf> for tentative project guidelines.