

## **EDP 381E: ADVANCED ITEM RESPONSE THEORY · FALL 2015 (Unique: 10800)**

**Class Time/Location** Wednesday, 1:00 pm – 3:45 pm; SZB 435

**Instructor** Jodi Casabianca, PhD; [jcasabianca@austin.utexas.edu](mailto:jcasabianca@austin.utexas.edu); SZB 538G  
Office Hours: Tuesday, 3:30pm-5:00pm (or by appointment)

### **Course Description**

Advanced IRT 381E is a course designed for graduate students in the EDP *Quantitative Methods* program that have an interest in learning sophisticated IRT methods. The course topics may change from semester-to-semester. This semester, we will cover four topics in item response theory (IRT) that extend the basic IRT course offering: (i) maximum likelihood estimation, (ii) Monte Carlo Markov Chain (MCMC) estimation, (ii) multidimensional IRT models, and (iv) IRT rater models.

### **Required Course Materials**

There is no required textbook for this class. Instead, I will assign readings on a weekly basis from resources available to you online. We will use R and other software packages during class, so be sure to bring your laptops to class and install any software I have asked you to install before class meetings.

### **Assessments**

Your course grade will be a combination of your performance on four presentations (60%), a series of mini-quizzes and homeworks (10%), and a final proposal (30%). At the end of each of the four units, each student will give a 15-20 minute presentation on a selected subtopic. A class discussion will follow the presentations. Your “presentation grade” includes your participation in the discussion of other students’ presentations.

**Tentative Course Schedule** (Note: class presentation/discussion days are **bolded** but may change based on the progress of the class)

- IRT Review – 8/26/2015
- Maximum Likelihood Estimation – 9/2/2015, 9/9/2015, **9/16/2015**
- MCMC Estimation – 9/23/2015, 9/30/2015, 10/7/2015, **10/14/2015**
- Multidimensional IRT Models – 10/21/2015, 10/28/2015, **11/4/2015**
- IRT Rater Models – 11/11/2015, 11/18/2015, 11/25/2015 (open class), **12/2/2015**

### **Grading Policy**

Your final course grade will be assigned based on the conversion from numeric course grade to letter grade as shown in the below table. Unless there was a computational error in your grade computation, grades will not be changed after the end of the semester.

A :	≥ 90	C+:	76-79
B+:	86-89	C:	73-75
B:	83-85	C-:	70-72
B-:	80-82	F:	<70

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### **Canvas**

All electronic materials used for this course will be available on Canvas. Grades for all work will also be available on Canvas. You are responsible for checking the Canvas course site regularly for announcements and course materials. As with all computer systems, there are occasional scheduled downtimes as well as unanticipated disruptions, so plan accordingly.

### **Communication Policy**

Students are expected to check email on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. In this course, email will be used as a means of communication with students. You will be responsible for checking your e-mail regularly for class work and announcements. I check email several times a day on weekdays (during regular working hours). **PLEASE do not email me in Canvas -- Please use the UT email system.**

### **Attendance Policy**

You are responsible for being present in class and for all lecture and written material covered in class, even if you miss a class. If a student misses a class, then regardless of the reason for class being missed the student is responsible for obtaining both the course material that was missed as well as any class announcements from his/her classmates.

*If you miss a presentation day*, you will give your presentation on the following class meeting, and will have to submit a 5-page double-spaced summary paper of the other students' presentations by the Monday after the date of the missed presentation. If the presentation was missed without an excuse, then there is a 10% penalty on the presentation grade. If the presentation was missed with a verified excuse (e.g. doctor's note) then there is no penalty, and the student will have two days from the date they are cleared to return to school to complete their summary paper.

### **Classroom Behavior**

In addition to being physically present in the classroom, I expect that all students will be mentally present as well. **This means that there should be minimal distractions due to technology including cell phones and other devices. Further, students should use their laptops to take notes and run analyses, but any other online activity (Facebook, YouTube) is not permitted, as it will distract you and other students that can see your screen.**

### **Accommodations for Religious Holidays**

Notify me of your pending absence at least fourteen (14) days prior to the date of observance of a religious holy day. If you must miss a class, a quiz or an assignment in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

### **Documented Disability Statement**

Any student with a documented disability who requires academic accommodations should contact Services for Students with Disabilities (SSD) at (512) 471-6259 (voice) or 1-866-329-3986 (video phone). Faculty are not required to provide accommodations without an official accommodation letter from SSD.