

**ECO 515 – Advanced Microeconomics**  
**ECO 590 –Survey Research**  
**ECO 590 –Game Theory**

**Hitchner room 157**

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**Course Description:**

There are two main goals to REP 515: 1) to introduce you to the formulation and conduct of economic research, and 2) to provide you with a background in Game Theory. Goal 1) is relevant for those signed up for ECO 590 – Survey Research and goal 2) is relevant for those signed up for ECO 590 – Game Theory.

For goal 1), the course will expose you to the formulation and conduct of social science research. The course attempts to define and illustrate the philosophical and practical underpinnings and general process of social science research – particularly on the data collection front. This is NOT a research statistics course but a course to help you frame research and understand how to collect data of higher quality. If time permits we may also include proposal writing, performing literature reviews, and reporting of results.

For goal 2), the course will provide you with a background in Game Theory: the study of strategic interactions among a small number/group of players. We will start with simple game theory problems/models that may be unrealistic, but provide some intuition to build on. As the semester proceeds we will cover more complex and realistic scenarios. The end of the semester will review risk and uncertainty and how this applies to game theory

**Homework assignments:** Homework assignments are included as part of the course. The date when homework is to be turned in will be given when it is assigned; assignments not handed in by 3:00 pm. on the due date will receive a grade of 0 unless you have made prior arrangements with me. Illness or family emergencies are usually the only acceptable reasons for missing a deadline. If such a problem arises, call or e-mail me before the deadline so we can discuss an alternative due date. If you call and I am not in, leave a message with a phone number where I can reach you. You are encouraged to work on homework as a class.

**Exams:** All exams will be take-home exams; you can use most all resources except each other.

**Grading** Numerical grades will be used for all exams and homework. Letter grades will be assigned only for the overall course grade given at the end of the semester. Your final grade will be determined as:

For Class:	<u>515</u>	<u>590 (1)</u>	<u>590(2)</u>
Homework:	20	25	25
Class Participation:	5	5	5
Exam:	25	70	
Exam:	25		35
Exam:	25		35

If you require course adaptations or accommodations because of a disability, please contact the coordinator for Services for Students with Disabilities, Onward Program at 581-2319.

Date	Topic etc.
1/12	<p>Intros. and overview; Philosophy of research; Planning research; Research Ethics Types of surveys (mail, phone, face-to-face, web, other) and issues in data collection Reliability and validity; Sampling and external validity; Threats &amp; ways to improve external validity; Probability &amp; nonprobability sampling</p> <p><b>Required readings:</b> AAPOREthics.pdf; information and power.pdf; research planning.pdf; external validity.pdf; sampling3.pdf; logic model.pdf; LMfront.pdf; sampling overview.pdf (only chapters 3 and 4); phone coverage.pdf; web sampling coverage.pdf; <b>Optional:</b> sampling2.pdf; ethics1.pdf;</p>
1/19	<p>Measurement and construct validity; Threats &amp; ways to improve construct validity Reliability and measurement error; Theory and types of reliability Qualitative measures and when to use them</p> <p>Survey research and questionnaire design; Question content &amp; wording Response formats; Question placement; Pretesting surveys Best practices: Response rates</p> <p><b>Readings:</b> writing effective questions.pdf; Dillman chapter2.pdf; Dillman chapter3.pdf; Dillman chapter4.pdf; focus group.pdf; guidelines for web surveys.pdf; Comparing Pretesting Methods.pdf; cognitive interviewing.pdf; <b>Optional/reference:</b> AAPOR definitions.pdf; designing questionnaires1.pdf; question testing.pdf; cognitive interviews-pretest1.pdf;</p>
1/26	<p>Phone and face-to-face; Interviews, the Role of the Interviewer Interviewer errors, Training and supervising Interviewers; Conducting the Interview Selecting the survey mode – Advantages &amp; disadvantages Mixed methods designs</p> <p><b>Readings:</b> eye tracking.pdf; WTP, interviewer phone.pdf; interviewer experience.pdf; conducting interviews.pdf; interviewer training.pdf; measurement error.pdf; interviewer effect on RR.pdf; lit review on web surveys.pdf; mode choice.pdf; mixed mode choice.pdf; mixed modes RR and quality.pdf; phone supervision.pdf <b>Optional/reference:</b> internet adjustment.pdf; race and virtual interviews.pdf; panel conditioning.pdf; mode-web-mail-phone.pdf; F2F vs web.pdf; mode phone, face, mail.pdf; WTP and interviewer effect.pdf;</p>
2/2	<b>SNOWED OUT</b>
2/9	<p>Design and internal validity; Establishing cause and effect Single- &amp; multiple-group and social interaction threats Introduction to experimental/quazi-experimental design; Designs and internal validity Analysis and conclusion validity; Threats &amp; ways to improve conclusion validity</p> <p><b>Readings:</b> survey design choice.pdf; mixed in web.pdf; mixed mode-quality.pdf; mode choice1-dillman.pdf; mode choice2.pdf; unimode vs mixed mode.pdf</p>
2/16	<p>Intro to game theory; Notation; Strategic forms; Dominant strategies &amp; solvability; Nash equilibrium</p> <p><b>Readings:</b> Dutta 1-6 <b>end 590(1)/begin 590(2)</b></p>
2/23	<p>Applications: Cournot markets and common property problems; Mixed strategies; Application: Bankruptcy law; Zero sum games</p> <p><b>Readings:</b> Dutta 7-10</p>
	<b>SPRING BREAK</b>

3/16	Extensive form and backward induction; Application: Research & development; Subgame perfect equilibrium <b>Readings:</b> Dutta 11-13 <b>EXAM 2 out</b>
3/23	Finitely & infinitely repeated games; Applications: Collusion in the stock market; Dynamic games; Application: Dynamic commons problem <b>Readings:</b> Dutta 14, 15, 16, 18 <b>EXAM 2 due</b>
3/30	Moral hazard; Games with incomplete information; <b>Readings:</b> Dutta 19, 20
4/6	Application: Cournot again; Mechanism design <b>Readings:</b> Dutta 21, 22
4/13	Application: Auctions; Signaling games in employment and the auto market (lemons) <b>Readings:</b> Dutta 23, 24
4/20	Risk and uncertainty; Wage markets; Insurance markets <b>Readings:</b> Dutta 27;
4/27	<b>EXAM 2 out</b>
Finals week	<b>EXAM 2 due</b>