This course provides a foundation in research methodology. You will learn the terminology, logic, and procedure for conducting research. By the end of the semester you will be equipped with the skills to design, conduct, report, and critically evaluate research studies. The class begins at a very fundamental level (e.g. what is an independent variable? where do I find a hypothesis?) and progresses to fairly advanced topics. The course content includes problem statements and hypotheses; mediators vs. moderators; variable types; true experiments, case studies and quasi-experimental research design; measurement of scale reliability and validity; threats to validity; ordinal and interval scaling methods; questionnaire construction and interviewing; and observation and other non-reactive techniques. Completion of this course and diligence in doing the considerable amount of assigned work will furnish the student with the confidence and basic know-how required to embark on formal social science research.

READINGS (syllabus codes):

(Bb) Readings posted on Blackboard: http://blackboard.cornell.edu/
(HO) Handouts, Blackboard course documents: http://blackboard.cornell.edu/
(Ø) Online
(O) Optional. These are optional readings and are not on reserve; not on Bb.

MECHANICS
Please type all work, double spaced, and hand in on time. Put your name only on back of all pages of assignments.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Due Date</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Sets (turn in at least 10 of 12)</td>
<td>Thursdays 10:00 am</td>
<td>50</td>
</tr>
<tr>
<td>Human Subjects Training</td>
<td>F 9/18 noon</td>
<td>20</td>
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<tr>
<td>Plagiarism tutorial and one-paragraph reaction</td>
<td>F 9/25 noon</td>
<td>10</td>
</tr>
<tr>
<td>PRELIM EXAM #1</td>
<td>W 9/30 7:30pm</td>
<td>60</td>
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<tr>
<td>PROJECT 1: True Experiment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Introduction &amp; Methods</td>
<td>F 10/9 12:00 noon</td>
<td>65</td>
</tr>
<tr>
<td>Poster Session (in-class presentation of Project 1A+B)</td>
<td>Tu 10/27</td>
<td>20</td>
</tr>
<tr>
<td>B. Results, Discussion &amp; Abstract</td>
<td>F 10/30 12:00 noon</td>
<td>75</td>
</tr>
<tr>
<td>SYNTHESIS DAY – details to follow</td>
<td>Tu 10/20</td>
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<tr>
<td>MYSTERY DAY – details to follow</td>
<td>Th 11/12</td>
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<tr>
<td>PRELIM EXAM #2</td>
<td>W 11/18 7:30pm</td>
<td>75</td>
</tr>
<tr>
<td>PROJECT 2: Instrument Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Questionnaire Instrument</td>
<td>W 11/25 12:00 noon</td>
<td>75</td>
</tr>
<tr>
<td>B. Observational instrument to validate questionnaire</td>
<td>F 12/4 12:00 noon</td>
<td>50</td>
</tr>
<tr>
<td>FINAL EXAMINATION (take home) [ready for pick-up on 12/9]</td>
<td>W 12/16 12:00 noon</td>
<td>100</td>
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</tbody>
</table>

Maximum Points 600

NOTE: DEA Graduate students must earn at least a B- in the course, or will be required to take it again.
DISCUSSION SECTION
In addition to 2 weekly classes, there is weekly section focused on a problem set. You may work collaboratively on the problem sets, however it is critical that you comprehend the material. See your TA if you need assistance.

FLIPPING
Significant portions of this course will be “flipped”. This means that we will provide recorded lectures and/or online videos for you to view at home (please take notes), allowing more time for hands-on practice applying concepts during class time. It is essential that lectures and videos assigned for at-home are completed on time. Failure to complete these materials will severely impair your capacity to function in class and to learn course content.

REQUIREMENTS
Problem sets. There are 12 problem sets. Mastering the problem sets, keeping up, and attending class as well as section, are the best strategies for success. Problem sets are not be “graded” rigorously (points are assigned based on effort and completeness), but doing them conscientiously will prepare you for the exams. Correct answers as well as common errors will be discussed in weekly section. Problem sets will be available on Blackboard on Fridays (http://blackboard.cornell.edu/) and are due the following Thursday by 10:00 am. Please photocopy or print your completed problem set (turn in original) so you have your work in front of you during section. You must turn in at least 10 of the 12 problem sets. Hand in hardcopies only to Kristin Aldred Cheek’s mailbox, Room 1423 MVR by 10:00 am each Thursday. (Note that mailroom is locked overnight).

Human Subjects Training. Any Cornell student, staff or faculty who conducts human research, must pass the Institutional Review Board (IRB) Human Subjects Training Course. This is a requirement for this class. The training takes about 3 hours to complete, so plan accordingly. Go to http://www.irb.cornell.edu/training/. At the end, you will have the option to send the results; please send them to Kristin Aldred Cheek (kla74@cornell.edu) so we have verification that you completed the training. You will not be graded based on your score – you will just receive points for you completing and passing the training. If you have completed the training already for a previous class or project, please login to the IRB website to download a “completion report.” Then email that report to your TA.

Plagiarism Tutorial. If you use words or ideas that are not your own, it is essential that you cite the source of the material. If you do not do so, you are plagiarizing, a violation of the code of academic integrity (see http://cuinfo.cornell.edu/aic.cfm). To help clarify what does and does not constitute plagiarism and to alert you to some of the subtleties of proper citation protocol, I would like you to complete a plagiarism tutorial available through the College of Arts and Science at this address: http://plagiarism.arts.cornell.edu/tutorial/. After completing the tutorial, please write a 1-paragraph reaction. Was the tutorial helpful? What was challenging? What questions do you still have? Give examples of what you learned. Please email your reaction to your TA.

Project 1A & B: The first project must conform to a true experimental design. Project one is to be conducted and written up individually. Handout 3 details what information is necessary for the initial project report. You will turn in this assignment in two parts first A) Introduction and Methods and B) Results, Discussion, Abstract. Turn hardcopy into Nancy Wells’ mailbox in Room 1423 MVR.

Project 2A & B. Project 2A is to develop, test and assess a questionnaire or interview. The instrument needs to employ one or more scaling techniques and include reliability information. Project 2B involves describing an observational measurement to validate the questionnaire or interview (see Handout 9). Turn hardcopy into Nancy Wells’ mailbox in Room 1423 MVR.

OTHER RECOMMENDED READINGS:

**SCHEDULE**

**Important:** For the first 6-8 weeks of the semester, there will be “flipped” video(s) or lecture(s) for you to view prior to each class. Please see blackboard (in the same folder with readings) for those materials; they are not listed below. It is essential you complete them prior to class.

**WEEK 1**

*Logical Foundation of Scientific Analysis [& Introduction to Flipping]*

8/25 (K) Chapter 1, Science and the scientific approach.
   (HO1) The art and logic of problem solving.

8/27 (K) Chapter 2, Problems and hypotheses.
   (K) Chapter 3, Constructs, variables, and definitions.
   (HO2) Problems and hypotheses.

**WEEK 2**

*Note: Problem set #1 available Friday this week*

9/1 (HO3) Manual of style for Social Science Reports (essential for Project 1)
   (K) Chapter 6, Variance and covariance.

9/3 (K) Chapter 8, excerpt “randomization” pp.169-171.
   (HO4) Outline for understanding research articles.
   (HO5) Research Design: Factorial/nested; moderator/mediator, (pp. 1-6).

**WEEK 3**

*Note: First problem set due this week – Thursday 10:00 am*

*Research Design*

9/8 (HO5) Research Design: Factorial/nested; moderator/mediator, (pp. 6-9).
   (K) Chapter 18, Research design: Purpose and principles.
   (K) Chapter 20, General designs of research.

9/10  (K) Chapter 21, Research design applications. (pp. 502-511)
(K) Chapter 23, Non-experimental research.

WEEK 4

9/15  (K) Chapter 21, Research design applications. (pp. 511-531)
(K) Chapter 19, Inadequate designs and design criteria.
(S) Chapter 2, Statistical conclusion validity and internal validity, pp. 53-62.


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9/18  HUMAN SUBJECTS TRAINING VERIFICATION DUE Friday 9/18 12:00 noon VIA EMAIL TO YOUR TA

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WEEK 5

9/22  (K) Chapter 22, Quasi-Experimental and N=1 Designs of Research
(S) Chapter 5, Quasi-experimental design that use both control groups and pretests, pp. 136-161.
(HO6) Independence.

(S) Chapter 4, Quasi-experimental designs that either lack a control group or… pp. 111-115.

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9/25  PLAGIARISM TUTORIAL & 1-PARAGRAPH REACTION DUE Friday 9/25 12:00 noon VIA EMAIL to TA

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WEEK 6

(HO7) Interpretable, nonequivalent control group designs.

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9/30  PRELIM EXAM #1 Wednesday 9/30 evening 7:30 pm
Principles of Measurement

10/1 (K) Chapter 26, Foundations of Measurement.
(K) Chapter 27, Reliability.

WEEK 7

10/6 (K) Chapter 28, Validity.
(HO8) Validation using a multitrait-multimethod matrix.

10/8 (S) Chapter 3, Construct validity and external validity, pp. 64-72.
(S) Chapter 2, Statistical conclusion validity and internal validity pp. 63
(S) Chapter 3, Construct validity and external validity, pp. 72-81, pp. 93-102.

10/9 PROJECT 1, PART A (Introduction & Methods) DUE Friday 10/9 12:00 noon

WEEK 8

10/13 No Class: FALL BREAK (Saturday 10/10 – Tuesday 10/13)

Scaling

10/15 (HO9) DEA 6560 Second Project Description
(HO10) Measurement scales and statistics

WEEK 9

10/20 SYNTHESIS DAY: REVIEW / REFLECTION Tuesday 10/20 (more details to come)


WEEK 10

10/27 POSTER SESSION Tuesday 10/27 in CLASS

10/29 (K) (O) Chapter 30, Objective tests and scales (optional).

10/30 PROJECT 1, PART B (Results, Discussion & Abstract) DUE Friday 10/30 12:00 noon

WEEK 11


Questionnaire and Interview Construction

11/5  (K)  Chapter 25, Survey research

WEEK 12
Note: No problem set due Week 12

11/10  (K)  Chapter 29, Interviews and interview schedules.

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11/12  MYSTERY DAY Thursday 11/12 (more details to come)
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WEEK 13


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11/18  PRELIM EXAM #2 Wednesday 11/18 evening 7:30 pm
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Observation and Other Nonreactive Techniques

11/19  (K)  Chapter 31, Observations of behavior and sociometry.

WEEK 14
Note: No problem set due Week 14


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11/25  PROJECT 2A DUE Wednesday 11/25 12:00 noon
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11/26  No Class: THANKSGIVING RECESS (Wednesday– Sunday)

WEEK 15
Note: LAST problem set due Thursday 12/10

(HO11) Observer reliability.


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12/4  PROJECT 2B DUE Friday 12/4 12:00 noon
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12/16  FINAL EXAMINATION (TAKE HOME) DUE Wednesday 12/16 12:00 noon
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