

# METHODS OF INQUIRY

## for Sustainability and the Built Environment

### DCP 3200 SECTION 1578 (3 CREDITS) – Fall 2016

MONDAY 4<sup>TH</sup> PERIOD (10:40<sup>AM</sup>–11:30<sup>AM</sup>)  
WEDNESDAY 4-5<sup>TH</sup> PERIOD (10:40<sup>AM</sup>–12:35<sup>PM</sup>):  
Architecture Building, ROOM 213

**INSTRUCTOR:** SCOTT ROTHBERG

**CONTACT:** [SROTHBERG@UFL.EDU](mailto:SROTHBERG@UFL.EDU) – **SUBJECT LINE “DCP3200: EMAIL TOPIC”**

**OFFICE HOURS:** WEDNESDAY and THURSDAY 8<sup>TH</sup> PERIOD OR BY APPOINTMENT. ARCH BLDG 142

This course provides an overview of critical thinking techniques and research methods, with an emphasis on techniques pertinent to the field of sustainability in the built environment. Course projects will focus on analyzing and rebutting claims, developing a project management strategy, and gathering and evaluating data regarding each student's interests.

#### COURSE GOALS & OBJECTIVES

- Practice critical thinking techniques to become comfortable evaluating claims within your field of interest.
- Explore which research methods for gathering and analyzing data are most applicable to different types of research questions.
- Apply critical thinking strategies and research methods to contemporary issues in sustainability and the built environment.
- Conceptualize and develop a problem statement and a proposal for each student's capstone project.

#### REQUIRED READING

Readings will be comprised of online articles, course reserves, and handouts (see schedule).

#### REQUIREMENTS & GRADING

Projects 35%

Midterm 20%

Participation 20% (attendance, in-class activities, field trips, and quizzes)

Homework 25%

Grade Scale	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Percent	93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	0-59
Grade Points	4.00	3.67	3.33	3.00	2.67	2.33	2.00	1.67	1.33	1.00	0.67	0.00

#### ATTENDANCE AND MAKE-UP WORK

Attendance is required; Wednesdays count as two periods towards attendance. Work or exams can **only** be made up for **excused** absences. Excused absences include illness, religious holidays, a death in the family, or participation as an athlete in official UF athletic events; to be excused, absences must be properly documented, for example with a doctor's note. Pop quizzes **cannot** be made up.

All projects and assignments must be turned in on time; any project or assignment may be turned in early. If you will not be in class to turn the assignment in, even if it is an excused absence (e.g. studio field trip), you must turn the assignment in early or coordinate with the instructor. Any assignment turned in after it is due will be marked late, and your assignment grade will be penalized 10% per day late.

## **UNIVERSITY POLICIES**

### **ACADEMIC MISCONDUCT**

Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

### **ACCOMMODATING STUDENTS WITH DISABILITIES**

Please do not hesitate to ask for accommodation for a documented disability. Students requesting accommodation for disabilities must first talk to the instructor, and register with the Dean of Students Office (<http://dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations. Please ask the instructor if you would like any assistance in this process.

## **OTHER POLICIES, RULES, AND RESOURCES**

### **GRADING POLICY**

If you have questions about your grade on an assignment, please contact your instructor within a week after the assignment has been returned so you can schedule an appointment and the instructor can explain how you were graded. If after meeting with your instructor you wish to dispute your grade, you may request for a re-grade on the assignment. The instructor will re-grade and the second grade will stand, regardless of whether it is higher or lower than the original grade. You may request re-grading or dispute a grade up to one week after the assignment has been returned to you or the grade is released.

### **COMMON COURTESY**

Cell phones and other electronic devices must be set to vibrate mode during class. Students who receive or make calls or text messages during class will be asked to step outside. The instructor may ask a student engaging in disruptive behavior to leave the class with the potential to mark the student absent for the day.

### **PROBLEMS WITH CANVAS**

For issues with technical difficulties for E-learning in Canvas, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)
- <https://lss.at.ufl.edu/help.shtml>
- (352) 392-HELP - select option 2

### **OTHER RESOURCES**

Other resources are available at:

- University Counseling and Wellness Center, 3190 Radio Road, (352)392-1575
- Student Health Care Center, (352)392-1161
- Dean of Students Office, 202 Peabody Hall, (352)392-1261
- Library Help Desk support

You can also contact your instructor for assistance in finding resources or dealing with problems you are having with the course.

**This syllabus is subject to change.**

## Topic & Assignment Schedule (subject to change)

Readings listed on the topic schedule will be completed prior to class.

- Mon 8.22 Course Introductions**
- Wed 8.24 Starting Exercise**  
**Getting to Know Research Journals**  
**Accountability Groups**
- Mon 8.29 Research Questions and Scientific Method**  
 - Reading: Eveleth – Barns Are Painted Red Because of the Physics of Dying Stars [<http://www.smithsonianmag.com/smart-news/barns-are-painted-red-because-of-the-physics-of-dying-stars-58185724/>]  
 - Reading: Scott et al. - Relation of Native-Language Reading and Spelling Abilities to Attitudes Toward Learning a Second Language [reserves]
- Wed 8.31 Types of Proof**  
**FiLCHeRS and Assessment of Claims**  
 - Reading: Sloan – A Fighting Spirit Won't Save Your Life [[http://www.nytimes.com/2011/01/25/opinion/25sloan.html?\\_r=3&ref=opinion](http://www.nytimes.com/2011/01/25/opinion/25sloan.html?_r=3&ref=opinion)]  
<http://www.psytopost.org/2016/06/moral-foundations-hypothesis-not-replicate-well-black-samples-43126>
- Mon 9.05 NO CLASS – Labor Day Holiday**
- Wed 9.07 Choosing a Research Methodology**  
 -Combining Study Designs with Data Collection Methods
- Mon 9.12 In-Class Activity: Sampling Project**
- Wed 9.14 TBD**
- Mon 9.19 Bias and Ethics**  
 - Reading: Myers – The reports of dinosaurs dying of farts are greatly exaggerated [<http://scienceblogs.com/pharyngula/2012/05/07/the-reports-of-dinosaurs-dying/>]  
 Print for class: Brown – ‘Duh’ Science: Why Researchers Spend So Much Time Proving the Obvious [<http://articles.latimes.com/2011/may/28/science/la-sci-duh-20110529>]  
 - Reading: Freedman – Lies, Damn Lies, and Medical Science (paragraphs 1-15)  
<http://www.theatlantic.com/magazine/archive/2010/11/lies-damned-lies-andmedical-science/308269/>  
 - Reading: Waldman – Facebook’s Unethical Experiment [[http://www.slate.com/articles/health\\_and\\_science/science/2014/06/facebook\\_unethical\\_experiment\\_it\\_made\\_news\\_feeds\\_happier\\_or\\_sadder\\_to\\_manipulate.html](http://www.slate.com/articles/health_and_science/science/2014/06/facebook_unethical_experiment_it_made_news_feeds_happier_or_sadder_to_manipulate.html)]  
 - Reading: Walsh – Scientists want to bring 22 animals back from extinction

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<http://www.thejournal.ie/science-conference-de-extinction-840062-Mar2013/>  
 - Reading: Bennet et al. – Neural correlates of interspecies perspective taking in the post-mortem Atlantic Salmon [<http://prefrontal.org/files/posters/Bennett-Salmon-2009.pdf>]

#### **Pseudoscience and Fraud**

- Reading: Psychic Who Said Amanda Berry Was Dead  
<http://abcnews.go.com/US/amanda-berrys-mom-told-psychic-sylvia-browneberry/story?id=19126853>  
 - Reading: Wynne – Parents' fear of vaccinations  
<http://www.abc.net.au/local/stories/2013/06/06/3776327.htm>  
 - Reading: Smith – An open letter to my dad  
<http://scienceblogs.com/aetiology/2013/04/03/an-open-letter-to-my-dad-on-the-occasion-of-his-recent-anti-vax-facebook-postings/>  
 - FiLCHeRS Assessment Homework due at 12:00pm.

**Wed 9.21 Presenting Work – Persuasion, Writing, Visual Aids**  
 - Reading: Goldacre – Why Don't Journalists Link to Primary Sources?  
<http://www.badscience.net/2011/03/why-dont-journalists-link-to-primary-sources/>  
 - Reading: Schmickle - The Politics of Historic Preservation [reserves]  
**In-Class Activity: Capstone Proposal Review (Step 1)**

**Mon 9.26 Midterm Exam (through material for 2.19)**

**Wed 9.28 Sampling Project Presentations**  
**Journal #1 Presentations**  
 Journal Review 1 due at 11:59pm

**Mon 10.03 Journal #1 Presentations (Continued)**  
**Evaluating Research**  
 - Reading: Geoengineering the Climate (pg ix-xi, 4-7) [reserves]  
 - Reading: Landman - Big Insurance, Big Tobacco and You  
<http://www.prwatch.org/node/8482>  
 - Reading: Union of Concerned Scientists - Smoke, Mirrors & Hot Air (pg 6-8) [reserves]  
 - Reading: McKie – Attacks Paid for by Big Business  
<http://www.theguardian.com/science/2012/feb/19/science-scepticism-usdomesticpolicy>  
 - Reading: Heavy Boots  
<http://www.phys.ufl.edu/~det/phy2060/heavyboots.html>  
 - Proposal Project Step 1 due at 12:00pm.

**Wed 10.05 Hurricanes - Visual Aid Assignment Discussion**  
**Research Concepts and Research Design**  
 - Reading: Lothian - Scenic Perceptions of the Visual Effects of Wind Farms on South Australian Landscapes [reserves]

**Mon 10.10 Sampling Methods, Questionnaire Design, Resource Inventories**  
 - Reading: Galen - Profiles of the Godless [reserves]  
 - Reading: Transgender Need Not Apply (pg 5, 8-10)

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**Wed 10.12 Behavioral Research**

- Reading: Curry – Two Years Later, Main Street Debate Persists  
[<http://www.gainesville.com/article/20130613/ARTICLES/130619803?tc=cr>]

**Mon 10.17 In-Class Activity: Capstone Proposal Review (Step 2)****Wed 10.19 FIELD TRIP: Depot Avenue Rail Trail**

- Meet at 13<sup>th</sup> Street Bridge at 10:45am. Be ready to walk!
- Reading: [<https://www.trailink.com/trail/waldo-road-greenway---depot-avenue-rail-trail---kermit-sigmon-bike-trail.aspx>]

**Mon 10.24 Behavioral Research Presentations**

- Presentation in class.
- Behavioral Research Project Write-Up due at 12:00pm.

**Wed 10.26 Cont.****Quantitative Analysis**

- Print for class: Audin - Three Myths of Energy Efficiency [reserves]
- Print for class: Glassman et al. - Using the Theory of Planned Behavior to Explain the Drinking Motivations of Social, High-Risk, and Extreme Drinkers on Game Day [reserves]
- Visual Aid Homework due in class.

**Policy Evaluation**

- Reading: Lott - More Guns, Less Crime (excerpt) [reserves]
- Reading: M.S. Swimming and Freedom  
[[http://www.economist.com/blogs/democracyinamerica/2010/08/liberalitarianism\\_and\\_regulation](http://www.economist.com/blogs/democracyinamerica/2010/08/liberalitarianism_and_regulation)]
- Reading: Zwerdling & Williams – For a Florida Fishery, ‘Sustainable’ Success  
[<http://www.npr.org/2013/02/12/171376575/for-a-florida-fishery-sustainable-success-after-complex-process>]
- Urban Agriculture Selection
- Aleccia – Backyard Chickens Dumped at Shelters  
[<http://www.nbcnews.com/health/backyard-chickens-dumped-shelters-when-hipsters-cant-cope-critics-say-6C10533508>]
- It’s Not a Fairytale [<http://www.takepart.com/article/2012/02/21/its-not-fairytale-seattle-build-nations-first-food-forest>]
- Heyes – Feds Raid Indoor Gardeners  
[[http://www.naturalnews.com/039794\\_indoor\\_gardening\\_war\\_on\\_drugs\\_police\\_raids.html](http://www.naturalnews.com/039794_indoor_gardening_war_on_drugs_police_raids.html)]
- Doiron – Victory! Adam Can Keep His Garden! [<http://kqi.org/blogs/roger-doiron/stand-solidarity-adam-querrero>]
- Popken – Illegal Urban Gardener Gets Away with It  
[<http://consumerist.com/2011/11/09/illegal-urban-vegetable-gardener-gets-away-with-it/>]

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- Mon 10.31 In-Class Activity: Capstone Proposal Review (Step 3)**  
**In-Class Activity: SWOT**  
- Reading: Crabbe - A Home for Crime? [<http://tinyurl.com/GNV-homeless>]  
- Reading: Crane – Cedar Key’s Clam Farmers Feel Squeezed Out  
[<http://www.gainesville.com/article/20130620/ARTICLES/130619527?tc=cr>]  
Journal Review #2 due at 11:59pm
- Wed 11.02 FIELD TRIP – TBD**
- Mon 11.07 Student Policy Evaluation Presentations**  
- Presentations in class.  
- Policy Evaluation Project Write-Up due at 12:00pm.
- Wed 11.09 Cont.**  
**Open Discussion**  
- Outline of Proposal Project Step 2 due at 12:00pm.
- Mon 11.14 GUEST SPEAKER: TBD**  
- Proposal Project Step 3 due at 12:00pm.
- Wed 11.16 Case Study Research**  
**Other Types of Research**  
- Reading: Zmeureanu & Marceau – Evaluating Energy Impact of People's Behavior in a House [reserves]  
- Reading: Glassman et al. - Winning Isn't Everything [reserves]  
- Print for class: Glassman et al. - Using the Theory of Planned Behavior to Explain the Drinking Motivations of Social, High-Risk, and Extreme Drinkers on Game Day [reserves – print only]  
Journal Review 3 due at 11:59pm.
- Mon 11.21 Extra Credit: Opinion Rebuttal Assigned**
- Wed 11.23 NO CLASS – THANKSGIVING HOLIDAY**
- Mon 11.28**
- Wed 11.30 FIELD TRIP – GRU Paynes Prairie Sheetflow Restoration Project**  
- Meet at the site at 10:45 am wearing closed-toed shoes, long pants, prescription  
Glasses, safety glasses, or eye protection.
- Mon 12.05 Capstone Project Proposal Presentations**  
Opinion Rebuttal Part 1 due at 12:00pm.
- Wed 12.07 Capstone Project Proposal Presentations**  
Opinion Rebuttal Part 2 due at 12:00pm.
- Mon 12.12 Everything Due**

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## Capstone Proposal Instructions

### Capstone Proposal Project

The goal of this assignment is to prepare you for your Capstone Project (DCP 4290). You will complete a proposal for your capstone project, and you may decide to change your proposal later. By taking this assignment seriously, you are likely to end up with a usable proposal for your Capstone Project with few modifications and be ready to start once your Capstone semester begins.

### CAPSTONE PROPOSAL PROJECT (Step 1)

Identify TWO potential projects and write a one-paragraph description of EACH to bring to class. Describe the site and/or problem and a suggestion for how you plan to approach the issue.

We will discuss these in small groups\*; your fellow students will help you discover whether or not your descriptions make sense and seem feasible, and perhaps which of the two would make a superior project. You will not be limited to either of these for your final assignment in this class or for your Capstone Project, but this is a good starting point.

To choose projects, think about sites or problems related to sustainability in the built environment that interest you. There is nothing wrong with choosing something you are already familiar with, in fact, this is a great way to find a project that will be successful. You should also look at the list of approved faculty advisors to get ideas about areas of research.

When we discuss your proposals in class, we will be using criteria used by potential faculty advisors to consider the feasibility of your suggestions.

A copy of the proposal guidelines is attached. You do not need to use the proposal form at this point in the project; the guidelines are simply there to help you think of possible projects.

Keep your copy of this assignment after it has been returned to you; you will be turning in all three portions for the final submission.

*\* Because we will work with this portion of the project in class, failure to complete this portion and bring it to class will result in points being taken off your proposal project grade AS WELL AS points being taken off your participation grade for class.*

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## CAPSTONE PROPOSAL PROJECT OUTLINE (STEP 2)

1. Description of general area of research interest, e.g., changing consumer behaviors
2. Proposed research question e.g., My research question is, what measures can be taken to incentivize consumers to use minimize water use on the UF campus?
3. Preliminary Study Design, e.g., I propose to develop a survey of a subset of the student population to asking them what strategies would most motivate them to change their behavior, or: e.g., I'll examine case studies of three utility companies to see what methodologies they have used successfully. From analysis of those case studies, I'll derive recommendations for the UF campus.
4. Deliverables, being sure to include the midterm, final presentations and final submittals, and broader impacts.

## CAPSTONE PROPOSAL PROJECT (STEP 3)

Choose a proposal you prefer to work with. Write it up using the Proposal Submission Form taking into consideration the comments from your peers and from me. Please write your portion into the form. Then, sign and submit as a pdf. **To receive full credit, submit to Canvas on or before 12/12/16.**

For the section about relevant coursework, consider past and future coursework that might be useful to you in completing your Capstone project. For example, did you work on a term paper or project that might have background information? It is alright to leave this section blank if you do not anticipate having any courses that will contribute to your Capstone, but this can be a helpful tool in completing your Capstone.

While Step 1 of this project only required you to submit a Topic (regardless of feasibility, etc.) for full credit, Step 2 and 3 will be graded based on having a complete proposal form AND by the criteria listed on the faculty guidelines attached below, so be sure your final proposal meets those criteria.

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