

*Methods of Inquiry for Sustainability and Built Environment
DCP 3200 (3 credit), Spring 2020*

Class Period: MON 4th PERIOD (10:40–11:30) &
WED 3rd and 4th PERIOD (09:35AM 11:30PM)

Class location: Rinker 210

INSTRUCTOR: Dr. Uma Sarmistha

CONTACT: sarmistha@UFL.EDU –

SUBJECT LINE “DCP3200: EMAIL TOPIC”

OFFICE HOURS: by appointment

OR BY APPOINTMENT

Prerequisites: Enrollment is limited to Junior and Senior level students.



BCN 1582 (or) IDS 2154 (or) another course approved in the topic area

Course Statement

This introductory to method 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 Objective

- 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



Required & Optional Text(s)

The required and optional text(s) for this course are as follows:

- **REQUIRED** | Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches. Fifth edition.* Los Angeles: Sage. 304 pp.
 - <http://www.worldcat.org/oclc/1047939791>
 - Cost | ~ \$67 (MSRP paperback) & ~ \$50 (discounted paperback)
- **OPTIONAL** | Chatfield, T. (2017). *Critical thinking: Your guide to effective argument, successful analysis, and independent study.* Los Angeles: Sage. 328 pp.
 - <http://www.worldcat.org/oclc/1108690464>
 - Cost | ~ \$27 (MSRP paperback) & ~ \$25 (discounted paperback)

Course Modules (CM)

General course module main topics and sub-topics are summarized below. Official weekly readings, assignments, and course content will be posted within Canvas and are subject to change.

| Modules | Module Main Topics | Module Sub-Topics |
|---------------|----------------------------|---|
| CM.CTE | Critical Thinking & Ethics | <ul style="list-style-type: none"> CTE.01 > Course Overview CTE.02 > Elements of Thought CTE.03 > Bias, Ethics, & Institutional Review Boards (IRBs) |
| CM.CA | Context & Approaches | <ul style="list-style-type: none"> CA.01 > Selection of Research Approaches CA.02 > Review of the Literature CA.03 > The Use of Theory CA.04 > Writing Strategies |
| CM.RD | Research Design | <ul style="list-style-type: none"> RD.01 > Abstracts & Introductions RD.02 > Purpose Statements RD.03 > Research Questions & Hypotheses |
| CM.RM | Research Methods | <ul style="list-style-type: none"> RM.01 > Quantitative Methods RM.02 > Qualitative Methods RM.03 > Mixed Methods |

Assignments and Grading

Assignment details, deliverables, due dates, and grades will be published on Canvas and may be subject to change.

| Grading Category | Additional Details | Points | % of Total |
|---|--|--------|------------|
| Attendance & Punctuality | Required | 100 | 10% |
| Preparation & Participation (PP) | Readings, Discussions, & Class Activities (points vary) <ul style="list-style-type: none"> Weekly & Module-Based | 300 | 30% |
| Student Praxis (SP) | Individual and Team (40 points/each + 60/SP.06) <ul style="list-style-type: none"> SP.01 > FiLcHeRS Assessment SP.02 > IRB-02 Online Training SP.03 > Methods of Inquiry & the Role of Language SP.04 > Sampling Project | 240 | 24% |
| Research Proposal (RP) | Individual (40 points/each + 80/RP.05) <ul style="list-style-type: none"> RP.01 > Step 1 > Research Ideas RP.02 > Step 2 > Literature Review RP.03 > Step 3 > Research Questions & Designs RP.04 > Step 4 > Research Methods & Faculty Advising RP.05 > Step 5 > Final Research Proposal Submission | 260 | 26% |
| Quizzes (Q) | Individual (25 points/each) | 100 | 10% |

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|--|--|--------------|-------------------------|
| | <ul style="list-style-type: none"> • Q.01 > Critical Thinking & Ethics (CTE) • Q.02 > Context & Approaches (CA) • Q.03 > Research Design (RD) • Q.04 > Research Methods (RM) | | |
| | | <i>Total</i> | 1000 100% |

Grades are based on evidence that students have completed assigned readings, participated actively in all class discussions and activities, completed writing and presentation assignments, and completed both in-class and outside-of-class activities throughout the semester. Completed tasks will be evaluated based on pertinence of content, critical thinking, creativity, and communication. Details and due dates for assignments are posted on Canvas. The University standard suggests students might expect to study outside of class for up to 3 times the weekly class contact periods (e.g., a 3-credit course might be 3 x 3 periods = 9 hours in Fall/Spring or 3 x 6 periods = 18 hours in Summer A).

| Grade | Points (GPA) | Percent | Grade | Points (GPA)* | Percent |
|-----------|-----------------|-------------|-----------|----------------|------------|
| A | 930-1000 (4.00) | 93.0-100.0% | C | 730-769 (2.00) | 73.0-76.9% |
| A- | 900-929 (3.67) | 90.0-92.9% | C- | 700-729 (1.67) | 70.0-72.9% |
| B+ | 870-899 (3.33) | 87.0-89.9% | D+ | 670-699 (1.33) | 67.0-69.9% |
| B | 830-869 (3.00) | 83.0-86.9% | D | 630-669 (1.00) | 63.0-66.9% |
| B- | 800-829 (2.67) | 80.0-82.9% | D- | 600-629 (0.67) | 60.0-62.9% |
| C+ | 770-799 (2.33) | 77.0-79.9% | E | 000-599 (0.00) | 0.0-59.9% |

Final student grades will follow University of Florida grades and grading policies.

- Undergraduate Students: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

ATTENDANCE AND MAKE-UP WORK

Attendance is mandatory. 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
- <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.

Weekly/ Daily Plan

| <i>Weeks</i> | <i>Class Schedule</i> | <i>Home Assignment Due</i> |
|--------------------------------------|---|---|
| | Module 1: Critical Thinking & Ethics | |
| Week1 Day 1: 01/06 | Course Introductions: | <i>Critical Thinking</i> |
| Week1 Day 2: 01/08 | Elements of Thoughts | <i>Talk about your research idea to 5 random people and see what is their reaction to your idea. – make notes</i> |
| Week2 Day: 01/13 | Bias, Ethics and IRB Ethics Bias and Ethics Reading: Waldman – Facebook’s Unethical Experiment [http://www.slate.com/articles/health_and_science/science/2014/06/facebook_u] Reading: Brown – ‘Duh’ Science: Why Researchers Spend So Much Time Proving the Obvious [http://articles.latimes.com/2011/may/28/science/la-sci-duh-20110529] UF IRB presentation | <i>IRB online training</i> |
| Week2 Day 2: 01/ 15 | Discussion on three ideas for scientific research Discussion on feedback on Research idea – Instructor will ask each of you to talk about your research idea and feedback received. | |
| Week3 Day 1:01/20 Holiday MLK | | |
| | Module 2: Context & Approaches | |
| Week3 Day 2: 01/22 | 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/] Types of Proof: FiLCHeRS and Assessment of claims Research Questions and Scientific Method Reading: Wynne – Patents fear of Vaccination [http://www.abc.net.au/local/stories/2013/06/06/3776327.htm]] | <i>FiLCHeRS Assessment Homework due at 12:00pm</i> |

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| Week4 Day1: 01/27 | Getting to know research resources and Research Journals (Review work) Library visit | Start working on Journal review (Work with Ann to choose the article for journal review) |
| Week4 Day 2: 01/28 | The Use of Theories | |
| Week5 Day 1 02/3 | Writing Strategy Presenting Work – Persuasion, Writing, Visual Aids Reading: - Goldacre – <u>Why Don't Journalists Link to Primary Sources?</u> [http://www.badscience.net/2011/03/why-dont-journalists-link-to-primary-sources/] - Reading: Hotz – The Human Brain as a Word Cloud, on a Shared Drive [Available in Canvas] | <i>Journal Review 1 due at 11:59pm</i> |
| Week5 Day 2 02/5 | Built your Research Model Guest Lecture – Dr. Abhinav Alakshendra; Department of Urban and Regional Planning | <i>Create your own model and present it in class on 2/13</i> |
| | Module3: Research Design | |
| Week6 Day 1 02/10 | Abstract and Introduction | Start working on Capstone Proposal Review (Step 1) |
| Week6 Day 2 2/12 | Research Deign continues – Purpose statement | Two page write up on purpose statement |
| Week7 Day1 2/17 | <i>Research question and Hypothesis</i> | |
| Week7 Day 2 2/ 19 | In class Capstone Proposal Step one Presentation | <i>Research Question</i> |
| Week8 Day 1 2/24 | Mid Term Review | |
| Week8 Day 2 2/26 | In Class Mid term | |

SPRING BREAK

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| | Module 4: Research Method | - |
| Week9 Day1 03/9 | Research Concepts and Research Design | |
| Week9 Day2 3/11 | Sampling Methods | <i>Sampling Project (Due on 3/18)</i> |
| Week10 Day1 3/16 | Kinds of Data collection | |
| Week10 Day2 3/18 | Guest Lecture – Depot Park tentative FIELD TRIP: Depot Park - Meet at the pavilion no 1 at 10::45am. Be ready to walk! | |
| Week11 Day1 3/23 | Quantitative data collection and Data Analysis | <i>Field note on Depot park due at 12 pm.</i> |
| Week11 Day 2 3/25 | Qualitative data collection and Data Analysis | |
| Week12 Day1 3/30 | Behavioral Research Reading: Curry – Two Years Later, Main Street Debate Persists http://www.gainesville.com/article/20130613/ARTICLES/130619803?tc=cr In-Class Activity: Capstone Proposal Review (Step 2) Behavioral Research Presentations - Presentation in class. | Outline of Proposal Project Step 2 due at 10:00am |

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| <p>Week12 Day2 4/1</p> | <p>Case Study Research Reading: Campbell – Case Studies in Planning: Comparative Advantages and the Problem of Generalization [Available in Canvas] Nelson and Martin – The Strategic Use of Case Studies [Available in Canvas] - 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]</p> | <p>In class – Behaviors project presentation</p> |
| <p>Week13 Day1 04/06</p> | <p>Mixed Method Research Design</p> | |
| <p>Week13 Day2 04/08</p> | <p>In-Class Activity: SWOT Work on Video proposal</p> | <p>-</p> |
| <p>Week14 Day1 4/13</p> | <p>Guest Lecture (Tentative) : Bahar Armaghani <i>Director, Sustainability and the Built Environment</i></p> | <p>.</p> |
| <p>Week14 Day2 4/15</p> | <p>Communicate Your Capstone Project Assigned Discussion on Mentor and Cover letter, Resume</p> | <p><i>Communicate Your Capstone Project Due at 12:00pm</i></p> |
| <p>Module 58: Putting it all together: Capstone Proposal</p> | | |
| <p>Week15 Day1 4/20</p> | <p>In-Class Activity: Capstone Proposal Review (Step 3)</p> | <p>- Proposal Project Step 3 due at 12:00pm</p> |
| <p>Week15 Day 2 4/22</p> | <p>Capstone Project Proposal Presentations</p> | |
| <p>Week16 Day 2 4/29</p> | <p>Open discussion on Capstone Project and the course (Class Potluck) Everything Due</p> | |

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.

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.

CAPSTONE PROPOSAL PROJECT OUTLINE (STEP 2)

1. *Description of general area of research interest*
2. *Important Terms to Define*
3. *Proposed research question. MUST BE IN THE FORM OF A QUESTION*
4. *Preliminary Study Design. Remember to include the location, potential variables (or) sample population, type of study design, how you will process/analyze data, and how your results will lead to an answer to your question.*
5. *Deliverables, being sure to include the midterm, final presentations and final submittals, and broader impacts (Your work is important. Who will you share it with and what format will that sharing take?)*

CAPSTONE PROPOSAL PROJECT (STEP 3)

For this assignment you will review UF faculty, searching for a potential advisor. Submit a name of the advisor you have formally reached out to for assistance on your capstone project.

CAPSTONE PROPOSAL PROJECT (FINAL)

*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 end of the class.***

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.