INTERDISCIPLINARY RESEARCH AND PRACTICE FOR SOCIAL-ENVIRONMENTAL MANAGEMENT

[Preliminary version, January 4, 2016]

Co-sponsored by: UF Center for Latin American Studies and TCD Program, in collaboration with the School of Natural Resources and the Environment (SNRE), School of Forest Resources and Conservation (SFRSC) and the University of Florida Water Institute

Instructors:
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381 Grinter Hall
Phone: (352) 273-4729, or (352) 392-9981
Email: simonea@ufl.edu; jdgianelli@ufl.edu
Classes: Tuesdays, 2-4 (8:30-11:30 am), Phelps Lab, Center for Wetlands, room 101
Office hours: Tuesdays, 1-2 pm or appointment by e-mail

Course Description:
This foundational course is designed to explore theories, methods and applications of interdisciplinary research among academic disciplinary fields in the biophysical, social sciences and humanities. It also includes methods, tools and examples for integrating academic and societal knowledge from real-world experiences brought to the class by UF alumni, faculty and students. The course contributes to strengthening UF graduate training in three main interrelated areas: a) history, politics and theories of inter- and trans-disciplinary science; b) research design, methods and tools, including case-study analysis and participatory methods; and c) academic structures, career paths and applications of interdisciplinary research.

The course is designed to fill a critical gap for training graduate students enrolled at UF interdisciplinary programs interested in developing skills, methods and tools for inter- and trans-disciplinary research that integrates knowledge within academy and between academy and society. The course is especially suited for students early in their career, as it will prepare them to understand and conduct inter- and trans-disciplinary research and collaborations during and after their academic programs. The course will also provide students with an understanding of alternative potential careers paths and familiarize them with the different departments, disciplinary orientations and diversity represented at UF campus.

The course will be developed through a flipped-classroom approach, with a mix of on-line materials and face-to-face interactions, including on-line interactions with UF alumni and on-site experiences. The course will approach three main integrative themes to explore interdisciplinary theories and methods for social-environmental management: water, fisheries and forests. The main group assignment for the course will be flexible to allow creative and critical thinking by the students. Assignments submitted by students will allow for a diversity of formats, such as wiki pages, case-study reports, workshop development, or integrative research projects.

Learning Objectives:
Students taking this course will be able to:

- Understand the historical and theoretical foundations of inter- and trans-disciplinary knowledge production across academic disciplinary fields as well as between academic and non-academic knowledge.
• Develop theoretical and methodological approaches for carrying out individual and collaborative interdisciplinary projects integrating disciplinary fields within biophysical, social sciences and humanities in both academic and non-academic settings.

• Develop problem-focused and critical thinking skills to address social-environmental problems and manage complex social-ecological systems in different scales, geographical and socio-economic settings.

• Develop competencies for collaborative and participatory research within academia and between academia and society.

• Identify career paths and real-world applications for interdisciplinary professionals.

Audience:

Graduate students in SNRE, TCD, MALAS, SFRC, MDP, WEC, FRE, Geography, Anthropology, Sociology, Agronomy Biology, Agricultural Education and Communication, among others, interested in learning about and developing interdisciplinary thinking, skills and methods in their research projects, applied to social-environmental management. This course is especially suited to first or second year students, providing them with a background and overview on interdisciplinary theory, research design and professional skills, as a foundation for future courses and for their Masters or Doctoral research projects.

Format:

This is a 3 hour/credit course with one main group assignment, one mid-term exam, a curriculum vitae/scholarship or job application individual assignment, and an individual reflection essay. The group assignment will allow creative and critical thinking by the students and may involve a diversity of formats, such as wiki pages, case-study reports, workshop development, or integrative research projects. Each part of the course evolves towards the completion of one segment of the assignment.

Course management includes on-line tools, personal meetings with students and project teams, student-led discussion of readings, and recorded on-line seminars with TCD/UF alumni.

Classes will include diverse formats, according to the theme being discussed: lecture, panel discussion, small group assignments, on-line seminars, class debate, exercises to enhance critical thinking, group learning tools and games.

Grades and Grade Points

For information on current UF policies for assigning grade points, see http://gradcatalog.ufl.edu/content.php?catoid=8&navoid=1493#grades

Attendance and Make-Up Work

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: http://gradcatalog.ufl.edu/

Grading and Evaluation: Students will be graded based on a multi-criteria system

• Class attendance and participation (10%)
• Student-led discussions of readings (10%)
• Completion of individual assignments (20%)
• Mid-term exam (20%)
• Interdisciplinary team projects (40%)

Final Grades will be assigned on the following scale*:

<table>
<thead>
<tr>
<th>GRADE</th>
<th>% accomplished</th>
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<tbody>
<tr>
<td>A+</td>
<td>&gt;93%</td>
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<tr>
<td>A-</td>
<td>92-90%</td>
</tr>
<tr>
<td>B+</td>
<td>89-87%</td>
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<tr>
<td>B</td>
<td>86-83%</td>
</tr>
<tr>
<td>B-</td>
<td>82-80%</td>
</tr>
<tr>
<td>C+</td>
<td>79-77%</td>
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<tr>
<td>C</td>
<td>76-73%</td>
</tr>
<tr>
<td>C-</td>
<td>72-70%</td>
</tr>
<tr>
<td>D+</td>
<td>69-67%</td>
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<tr>
<td>D</td>
<td>66-63%</td>
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<tr>
<td>D-</td>
<td>62-60%</td>
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<tr>
<td>E</td>
<td>59% and below</td>
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</table>

*Please note that Letter grades of C-, D+, D, D- or E are not considered passing at the graduate level.

Attendance Policy: Attendance at all sessions is required. Please arrive on time as a courtesy to your colleagues. Cell phones must be turned off at all times during class.

In addition, UF provides an educational and working environment for its students, faculty, and staff that is free from sex discrimination and sexual harassment. For more about UF policies regarding harassment, see: http://www.dso.ufl.edu/studentguide/studentconductcode.php#s4041

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment." It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more
information regarding the Student Honor Code, please see: https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/

Software Use: All faculty, staff and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. 0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university’s counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

• University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/

Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Wellness Coaching

• Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/

U Matter, We care Initiative at UF:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

More information and resources: http://www.umatter.ufl.edu/
## COURSE SCHEDULE (SUBJECT TO SMALL CHANGES AND ADJUSTMENTS)

### PART 1: Historical, Theoretical and Critical Foundations

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>TOPIC</th>
<th>ACTIVITIES &amp; ASSIGNMENTS</th>
<th>REQUIRED READINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01/05</td>
<td>Introduction to the course: Inter- and trans-disciplinarity from theory to practice</td>
<td>Course overview Expectations and concerns Assignments</td>
<td>n/a</td>
</tr>
<tr>
<td>2</td>
<td>01/12</td>
<td>Historical, Theoretical and Critical Foundations: Epistemology and the History of Academic Disciplines</td>
<td>Debrief Readings discussion Lecture Group projects</td>
<td>Foucault, 1994 (CH5) Weingart, 2010</td>
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<tr>
<td>3</td>
<td>1/19</td>
<td>Knowledge and Power: Multi-, inter- and trans-disciplinarity</td>
<td>Debrief Readings Discussion Group projects</td>
<td>Tress et al., 2005 Klein, 2010 Cheruvell, 2014</td>
</tr>
<tr>
<td>4</td>
<td>1/26</td>
<td>Professional Careers for Interdisciplinary Professionals: Career Center Guest Lecture</td>
<td>Debrief Guest lecture Group projects Required Blog posting #1</td>
<td>Pair discussion: Brown et al., 2015, Ledford, 2015 and Noorden, 2015</td>
</tr>
<tr>
<td>5</td>
<td>2/2</td>
<td>Theory of the Commons and Social-environmental Governance</td>
<td>Debrief Lecture Group projects</td>
<td>Ostrom et al., 1999 Agrawal, 2003 Video: Ostrom’s Nobel Prize Lecture</td>
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# PART 2: Interdisciplinary Research Design: Structure, Methods, Tools

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<thead>
<tr>
<th>WEEK</th>
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<th>REQUIRED READINGS</th>
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<tr>
<td></td>
<td></td>
<td>An Overview of Quantitative and Qualitative Methods in Inter- and trans-disciplinary Research</td>
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<tr>
<td>8</td>
<td>2/23</td>
<td>Participatory Methods and Tools in Inter- and Trans-disciplinary Research</td>
<td>Debrief Readings discussion Stakeholder matrix Required Blog Posting#2 Individual data for class SNA</td>
<td>Blog posting #2 Athayde et al., 2013 TBA</td>
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<td>Case-studies: - Integrating Indigenous and Scientific Knowledge Systems for Participatory Natural Resource Management in the Brazilian Amazon - Citizen Science and Stakeholder Engagement in Fisheries in Florida, US</td>
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<td>9</td>
<td></td>
<td>SPRING BREAK: NO CLASS</td>
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<tr>
<td>10</td>
<td>3/08</td>
<td>Case-studies: Social-environmental Management of Watersheds and Forest Landscapes Overview of case-study methodology</td>
<td>Debrief Readings discussion Case-study analysis</td>
<td>Ying, 2014 Dearing et al., 2015 TBA</td>
</tr>
<tr>
<td>12</td>
<td>3/22</td>
<td>Mapping Relationships: Social Network Analysis in Interdisciplinary Research Ecopath demonstration</td>
<td>Debrief Readings discussion Part 2 assignment due: Group presentations</td>
<td>Cross et al., 2002 Moret et al., 2009 Video SNA</td>
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## PART 3: Applying Interdisciplinary Research and Career Paths

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>TOPIC</th>
<th>ACTIVITIES &amp; ASSIGNMENTS</th>
<th>REQUIRED READINGS</th>
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<tbody>
<tr>
<td>13</td>
<td>3/29</td>
<td>Job Market: Academic Structures, Opportunities and Career paths for Interdisciplinary Professionals</td>
<td>Debrief and summary of Part 2 Group projects</td>
<td><em>Mid-term exam</em></td>
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<td>Klein, 2010 TBA</td>
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<td>14</td>
<td>4/05</td>
<td>Panel: Tom Frazer and Bette Loiselle (SNRE and TCD/WEC, TBC) Publishing Interdisciplinary Research: Overview of Journals, Venues, Formats and Obstacles</td>
<td>Debrief</td>
<td>Readings discussion</td>
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<td></td>
<td>Assignment due: CV and job/scholarship application</td>
<td><em>Kainer et al., 2006 TBA</em></td>
</tr>
<tr>
<td>15</td>
<td>4/12</td>
<td>Panel to Present and Discuss Team Projects Group Presentations Groups have the opportunity to review their projects and hand-in a final version for grading</td>
<td>Debrief</td>
<td><em>Part 3 assignment due:</em> Presentation of Interdisciplinary Group Projects</td>
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<td>n/a</td>
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<tr>
<td>16</td>
<td>4/19</td>
<td>Last day of Classes Reflection, Evaluation and Course Closure</td>
<td>Debrief</td>
<td>Evaluation Support for group projects</td>
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<td>n/a</td>
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<tr>
<td>17</td>
<td>4/26</td>
<td>Exam Week</td>
<td>Assignment due: final group projects (written)</td>
<td>n/a</td>
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</tbody>
</table>

### Assignments & critical dates:

<table>
<thead>
<tr>
<th>Date</th>
<th>Assignment Due (submit by 11:59 pm, unless noted otherwise)</th>
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<tbody>
<tr>
<td>Jan 25</td>
<td>Required Blog Posting # 1, submit by 12 pm, for next day’s discussion</td>
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<tr>
<td>Feb 9</td>
<td>Group Project – Part 1</td>
</tr>
<tr>
<td>Feb 22</td>
<td>Required Blog Posting # 2, submit by 12 pm, for next day’s discussion Questionnaire - Individual Data for Class SNA</td>
</tr>
<tr>
<td>Mar 15</td>
<td>Individual Reflection Paper</td>
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<tr>
<td>Mar 22</td>
<td>Group Project – Part 2: group presentations</td>
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<tr>
<td>March 29</td>
<td>Mid-term exam</td>
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<tr>
<td>Apr 5th</td>
<td>CV and job / scholarship package</td>
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<tr>
<td>Apr 12</td>
<td>Group Project – Part 3: FINAL group presentations</td>
</tr>
<tr>
<td>Apr 19</td>
<td>Evaluations</td>
</tr>
<tr>
<td>Exam week</td>
<td>Group Project –Part 4: FINAL Written part</td>
</tr>
<tr>
<td>Apr 26</td>
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Course Materials:

Required readings:

Part 1:


Video: Elinor Ostrom’s Economics Nobel Prize Lecture: https://www.youtube.com/watch?v=T6OgRki5SgM

Part 2:


Dearing et al. 2015. Social-ecological systems in the Anthropocene: The need for integrating social and biophysical records at regional scales. The Anthropocene Review December 2015 vol. 2 no. 3 220-246


Video: SNA: The basics: https://www.youtube.com/watch?v=ei3YEn8xUnI

[Additional readings to be announced]

Part 3:


[Additional readings to be announced]
**Additional Readings and Materials:**

**Recommended Textbooks:**


Bernard, H. R. 2013. Social research methods: qualitative and quantitative approaches. Los Angeles, SAGE.


**SUGGESTED READINGS PART 1:**


**SUGGESTED READINGS PART 2:**


SUGGESTED READINGS PART 3:


About the Instructors:

Simone Athayde is an environmental anthropologist and ethnobotanist, interested in advancing theoretical and methodological approaches for inter- and trans-disciplinary research and production of knowledge between the biophysical and the social sciences, as well as between academy and society. She has carried out extensive training and research activities in collaboration with universities, NGO’s and indigenous organizations, as well as long-term ethnographic and participatory research among indigenous peoples in the Brazilian Amazon. Currently, she is a TCD Core Faculty and the UF leader for the Amazon Dams Network, hosted in the Tropical Conservation and Development Program (TCD) in the Center for Latin American Studies. Simone is also a World Social Science Fellow for the International Social Science Council (ISSC), UNESCO, and an indigenous knowledge expert for the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) coordinated by UNESCO, UNDP and FAO. She holds a Bachelor degree in Biology, Specialization in Environmental Education and two master degrees, in Botany (UFPR, Brazil) and in Ethnobotany (University of Kent, UK). In 2010, she earned her doctoral degree in Interdisciplinary Ecology from University of Florida, with concentration in Anthropology and a TCD certificate. She has earned awards from the TCD Program (2011 Schmink Award for Outstanding Dissertation in Conservation and Development), from the International Society of Ethnobiology, from the Ministry of Culture in Brazil, and from the Center for Entrepreneurship and Innovation at UF.

Jynessa Dutka-Gianelli works on fisheries multidisciplinary projects integrating fisheries management, human dimensions, and ecological studies, related to natural resources conservation, protection of threatened organisms and their habitats. She also works on research programs related to life histories, population dynamics, and ecology of fish, examining movements of coastal fish utilizing acoustic telemetry. Her recent projects involve spatial ecology research on snook species, methodologies for stakeholder engagement and participatory research in fisheries place-based management, and collaborative interdisciplinary projects investigating fish and fisheries in the Amazon Basin.