

Broader Impacts of Science on Society

BSC 6038 (section 082A) & GLY 6932 (section 4545)

Fall 2020 Syllabus

CATALOG DESCRIPTION

There is an increasing emphasis on the relevance of what a scientist does and how we impact society in general. This is manifested in many ways, for example, NSF now requires “Broader Impacts” statements in grant proposals and explicit plans for how these kinds of activities will be accomplished. This course will explore ways in which scientists can increase impact, particularly to society at large. During this seminar-format course, students will engage in active participation and discussion. The beginning of the course will feature presentations by the instructors and invited speakers, and preparations for the class project(s). Students’ interests and individual projects will primarily drive the remainder of the course.

LEARNING GOALS

By the end of the course, the student will be able to:

- Better understand the landscape of NSF’s Broader Impacts review criteria;
- evaluate Broader Impacts plans from other researchers;
- design many types of broader impacts activities at UF; and
- develop the tools needed to conduct Broader Impacts activities in the future.

REQUIRED TEXTBOOK

MacFadden, Bruce J. (2019) *Broader Impacts of Science on Society*.
ISBN 978-1-108-43428-7

INSTRUCTOR INFORMATION

Dr. Bruce J. MacFadden
Distinguished Professor and Curator
FLMNH (Florida Museum of Natural History)
Office Hours: After class or by appointment via [Zoom](#).
Telephone: (352) 273-1937
Email: bmacfadd@ufl.edu

Dr. Mariela Pajuelo
Assistant Scientist
FLMNH (Florida Museum of Natural History)
Office Hours: After class or by appointment via [Zoom](#).
Telephone: (352) 214-3060
Email: mpajuelo@ufl.edu

CREDITS: 2

CLASS DATE & TIME

This is a synchronous class with live meetings. Class will meet on Thursdays, periods 6 and 7 (12:50 pm to 2:45 pm) via [Zoom](#) (Meeting ID: 916 1717 0284). First class on 3rd September 2020; last class on 3rd December 2020.

CLASS FORMAT

Class periods will mostly be devoted to presentations and discussions (e.g., of readings). The last class (3rd December 2020) will be devoted to students' final project presentations.

CLASS DEMEANOR

Students are expected to be to class on time and behave in a manner that is respectful to the instructor and to fellow students. Please do not use of cell phones and restrict eating to outside of the classroom. Opinions held by other students should be respected in discussion, and conversations that do not contribute to the discussion should be held at minimum, if at all.

COMMUNICATION, CONTENT and DELIVERY

Assignments and notifications will be provided using the [UF e-Learning course website](#).

MATERIALS AND SUPPLIES FEES

There are no additional fees for this course.

ATTENDANCE AND MAKE-UP ASSIGNMENTS

Because this is a student-focused course, attendance is required and is part of the final grade (see below).

Other requirements for class attendance, assignments, and related matters are consistent with university policies that can be found in the [Graduate Catalog](#).

SCHEDULE (Subject to Change; also see separate schedule TBD and disclaimer below)

Week	Date	Topic	Speaker(s) [Instructor host]	Readings
1	Sep 3	Organizational; Goals; Topics; Introduction	Pajuelo, MacFadden	Chapter 2
2	Sep 10	Diversity and broadening representation, INCLUDES	Pajuelo	Chapter 9
3	Sep 17	Science Communication; Elevator	Burton [Pajuelo]	Chapters 4 and 8

Speeches

4	Sep 24	Informal Learning: Museums	MacMahon [MacF]	Chapter 13
5	Oct 1	K-12 Outreach	Abramowitz, Killingsworth [MacF]	Chapter 11
6	Oct 8	Innovation; Strategic science vs curiosity science	MacFadden MacFadden	Chapters 3 and 7
7	Oct 15	Informal Learning: Social media and community science	Pajuelo	Chapters 14 and 15
8	Oct 22	Evaluation	Mills [MacF]	Chapter 18
9	Oct 29	TBD	Pajuelo	
10	Nov 5	TBD	Pajuelo	
11	Nov 12	TBD 2.Discussion of projects -- class	Pajuelo	
12	Nov 19	TBD	TBD	
13	Nov 26	<i>No Class – Thanksgiving Holiday</i>		
14	Dec 3	Final project presentations	MacFadden, Pajuelo	

YOUR GRADE

Will be based on (1) class participation (50%); (2) class presentation (20%); and (3) final project (30%).

EVALUATION

Class Participation: 50%

Class presentation: 20%

Final project: 30%

GRADING SCALE (%)

A: 93-100

A-: 90-<93

B+: 88-<90

B: 83-<88

B-: 80-<83

C+: 78-<80

C: 73-<78

C-: 70-<73

D: 60-<70

E: <60

DEFINITION OF CLASS PARTICIPATION (SEE EVALUATION ABOVE)

Participation in class represents half of the points of the course assessment. This will require:

- (1) being present in class for the entire period;
- (2) having at least one question written down about the week's assignment; and
- (3) active participation, i.e., discussing assignment or asking question(s) in class.

Class presentation will be based on a topic of your interest and be presented during weeks 9 to 11.

Final project will be some kind of project related to Broader Impacts.

COURSE EVALUATIONS

Evaluations of the instructor are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at [GatorEvals](#). Summary results of these assessments are available to students at [GatorEvals Results](#).

DISABILITY ACCOMMODATION

Students with disabilities requesting accommodations should first register with the [Disability Resource Center](#) (352-392-8565) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible.

UF COUNSELING RESOURCES

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.
- Career Resource Center, Reitz Union, 392-1601, career and job search services.

Many students experience test anxiety and other stress related problems. The [Counseling and Wellness Center](#) can help you address those problems (4th floor at Peabody Hall, 392-1575).

TOLERANCE POLICY

[The University of Florida policy on Discrimination and Harassment](#) will be adhered to strictly. Any student who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status can make a formal complaint report to the Institutional Equity and Diversity officer and/or to the Dean of Students Office/Student Conduct and Conflict Resolution (DSO/SCCR). Resources and reporting options can be found online at [Student Conduct and Conflict Resolution](#).

COVID-19 RELATED PRACTICES

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

DISCLAIMER

This syllabus and course requirements are subject to change. If changes occur, these will be communicated to the students.