

BIOL 2803 HP – COMMUNICATING SCIENCE TO THE PUBLIC
FALL 2013, TR 8:00-9:30am
3 credit hours (letter grade)

Instructor:

Dr. Jennifer Leavey

jennifer.leavey@cos.gatech.edu

404-385-7229

365A CULC

Office Hours, TR 9-11am or by appointment

Course Purpose:

Students will develop communication skills and scientific expertise in the context of designing, creating, implementing, and assessing informal science education exhibits or demonstrations, specifically for the Atlanta Science Festival to be held March 22-29, 2014. Students will bring their demonstrations to nearby elementary schools to complement classroom science instruction and assess the effectiveness of each project in meeting learning objectives.

Course Description:

The course will meet twice a week for 80 minutes. There will be no tests, but there will be in class quizzes, assignments, activities and a semester-long project. Class time will consist of brief lectures, small group discussions, activities and student-led presentations.

Course Goals and Learning Outcomes:

The specific learning outcomes for the course are:

- 1) *Students will be able to identify and describe evidence-based models of effective informal hands-on science education for the general public.*
- 2) *Students will use knowledge gained through research on a scientific topic in combination knowledge of effective informal science education methods to create a hands-on demonstration for the Atlanta Science Festival.*
- 3) *Students will be able to identify and describe modes of assessment used in informal science education settings.*
- 4) *Students will create assessment strategies for their demonstrations.*
- 5) *Students will evaluate the effectiveness of their demonstrations.*
- 6) *Students will create revised demonstrations based on their assessment results.*

Grading: The course will be graded on a basis of 100 points:

90 or higher = A 80-89 = B 70-79 = C 60-69 = D 59 or lower = F

40% Assignments and activities

20% Project Proposal

20% Demonstration

20% Final Product

Texts:

Learning Science in Informal Environments: People, Places, and Pursuits, Philip Bell, Bruce Lewenstein, Andrew W. Shouse, and Michael A. Feder, Editors, National Research Council, 2009 (Free Download)

Surrounded by Science: Learning Science in Informal Environments by Marilyn Fenichel, Heidi A. Schweingruber, National Research Council, 2010 (Free Download)

Course expectations and guidelines:

Students are required to attend class. Students absent from class will earn a zero on the day's activity or homework. Students with institute approved absences will be given a suitable substitute assignment.

Please see www.honor.gatech.edu for Georgia Tech's Academic Honor Code, which you are required to uphold.

Course information will be posted on tsquare.gatech.edu .

Course Schedule (Subject to Change)

Date	Topic	Reading	Speaker
20-Aug	Intro to Informal Science Education	Bell, pp1-7	
22-Aug	Informal Learning Settings and Formats	Fenichel, Ch1	
27-Aug	Learning Theory I	Bell, Ch2	
29-Aug	Learning Theory II	Fenichel, Ch3	
3-Sep	Diversity and Equity in STEM I	Bell, Ch7	
5-Sep	Diversity and Equity in STEM II	Fenichel Ch5, 7	
10-Sep	Assessment Development I	Bell Ch3	
12-Sep	Assessment Development II	Fenichel Ch6	Tris Ustchig
17-Sep	Assessment Development III	Bell Appendix B	
19-Sep	PROPOSAL PRESENTATIONS		
24-Sep	ISE Experiences for the very young	Bell Ch6, Fenichel Ch8	
26-Sep	ISE Experiences for school children	"	
1-Oct	ISE Experiences for adults	"	
3-Oct	ISE Experiences for seniors	"	
8-Oct	Science and the Media I	Bell Ch8	
10-Oct	Science and the Media II		David Terraso
15-Oct	FALL BREAK		
17-Oct	Work Day		
22-Oct	ONSITE PROJECT PRESENTATIONS		
24-Oct	ONSITE PROJECT PRESENTATIONS		
29-Oct	Zoo		Stacy Graison
31-Oct	Short-Term Research Experiences		

5-Nov	Project Assessment Review I		
7-Nov	Project Assessment Review II		
12-Nov	Science Museums		Chris Bean
14-Nov	Science Taverns		Marc Merlin
19-Nov	Science Festivals		
21-Nov	Citizen Science		
26-Nov	Aquarium		Al Dove
28-Nov	THANKSGIVING		
3-Dec	FINAL PRESENTATIONS I		
5-Dec	FINAL PRESENTATIONS II		