FOR 6934 – Communicating Natural Resources Science with the Public

1 Overview

Introduces the principles behind effective science communication with natural resource users and the public. We cover the basics of identifying audiences and making your message accessible and engaging, but concentrate on the science and theories underlying how people receive and interpret information and their application in communication around contentious issues.

Detailed Description

There is an increasingly strong push for natural resource scientists and professionals to communicate with members of the public. However, few professionals receive formal communication training. Communication can be particularly important and difficult in natural resource fields, where professionals are faced with conflicts over resource access and management among different stakeholder groups and with extremely complex and uncertain issues.

This course is designed to introduce natural resource professionals to the principles behind effective science communication. We will first cover the basics of identifying audiences, simplifying language, and using storytelling and other methods to pique interest, but will concentrate on the science and theories underlying how people receive and interpret information. Often natural resource professionals are faced with communication in conflict-ridden or contentious situations, and an understanding of what informs people's attitudes toward information can help in designing effective communication strategies. We'll briefly introduce a few common methods people and agencies use to communicate with the public, but the focus will be on using them in the context of the theories and methods discussed and on evaluating their ability to aid in accomplishing communication goals. Though the principles underlying this course are universal, the focus will be on use and application in the context of natural resource science and management.

Course Details:
- 3 Credits
- Semester: Summer C
- This course is 100% online
- http://elearning.ufl.edu/

Course Prerequisites: none

Instructor: Chelsey Crandall
- Please use the Canvas message/Inbox feature for fastest response.
- Office hours: available to schedule by email (kicksea@ufl.edu)

Textbook(s) and/or readings:
There are a number of reading materials for this course. It is imperative that you read the materials and use them in your applications and discussions online. The readings are available on electronic reserve at https://ares.uflib.ufl.edu/ares/ and there is a link to them in the Canvas course at https://elearning.ufl.edu. Access from off campus is through the UF VPN client. For more

information on downloading, installing and using the VPN client, please go to http://www.uflib.ufl.edu/login/vpn.html. For general information on course reserves, please contact the Course Reserves Unit at 352-273-2520, or email at eres@uflib.ufl.edu.

To find readings, please use the tags within the course reserves. The tag Week 3, for example, will have the readings for this course in Week 3.

2 Learning Outcomes

At the end of this course, each student will be able to:

- Define various communication theories
- Identify the communication theories at play in a communication success or failure
- Compare the strengths and weaknesses of various communication methods and platforms
- Evaluate communication needs
- Assess the efficacy of a given communication effort or strategy
- Design a communication plan to address a contentious natural resource issue

3 Course Logistics

This course is entirely web-based and students may access lectures, readings, and supporting materials as they become available each week.

Learning modules consisting of a lecture and/or video, readings, and other supporting materials are provided online for each topic. Learning modules build on previous modules so you should complete the learning modules in the order presented.

Each learning module has required readings beyond the lecture or video. These files will all be made available for you to view on your computer, save, or print. There may be references to additional (optional) readings and resources if you desire further investigation of a topic.

Technology Requirements:
- A computer or mobile device with high-speed internet connection.
- A headset and/or microphone and speakers.
- Latest version of web browser. Canvas supports only the two most recent versions of any given browser. What browser am I using?
- Voicethread: http://ufl.voicethread.com (more instructions will be provided)

3.1 Assignments & Deliverables

Participation

Every week you will be first introduced to the concept or theory (for example through a lecture and/or reading) and engage with applications linked through Canvas, and then discuss and apply what we have learned through assignments and the discussion board. 5 points will count toward participation each week based on your engagement with the discussion, for a total of 60 points. Note that your discussion grade is based on participation and not on evaluating the accuracy of your contributions (you will get feedback, but it won't count against your grade). The goal of the discussion board is to have a place for you to connect with your classmates and reflect on what we learn.

Additional assignments are explained here and in Canvas:

Projects/Writing Assignments

1. **Weekly Application Assignment**
   Each week you will be asked to do a short application assignment. Each will be worth 5 points, for a total of 60 points.

2. **Review Quizzes**
   You will have a total of 4 short quizzes throughout the semester to help you review information. Quizzes will be through Canvas, and each will be worth 10 points. The purpose of these quizzes is to give you a chance to review what we have learned and to evaluate how well you understand it. The quizzes will be open book. Quizzes will be posted on week 3, week 6, week 9, and week 11, and will be due by the end of the following week.

3. **Semester Project**
   For this assignment, you will be asked to propose a communication plan to navigate a contentious natural resources issue. This could be one you are facing as part of your own work and professional life, or one outside of your field. Identify at least one communication goal: for example, it could be about correcting a misconception in your audience, about building acceptance of a message or regulation, changing an attitude, or another communication goal. First, describe the situation, including a review of any communication efforts that have been used to date and how successful they have/haven't been. Use what we know about the psychology behind communication and information reception to evaluate the current situation and any past communication efforts. Identify which communication theories might be useful to understand and navigate the situation. Then propose in detail a communication strategy using at least one method we have discussed (you could also propose ones we haven't covered), and include how you will apply the theories we have learned to improve the efficacy of your strategy. Finally, include a plan to evaluate your efforts.. Your Final Submission due by the end of Week 12. This assignment will be worth a total of 40 points.

3.2 Grades & Grading Scale

30% Participation in Discussions
30% Weekly Application Assignments
20% Quizzes
20% Final Assignment

For information on current UF policies for assigning grade points, see
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Grading Scale (%)
A 90-100
B+ 85-89.99
B 80-84.99
C+ 75-79.99
C 70-74.99
D+ 65-69.99
D 60-64.99
E < 60

4 Course Content

Module	Dates	Topic(s)	Assignment(s) Due
1	May 10-16	Introductions	Introductions post
SECTION 1: MAKING COMMUNICATION ACCESSIBLE, ENGAGING, AND IMPACTFUL			
2	May 17-23	Language and Story	
3	May 24-30	Knowledge-Deficit Model and Mental Models	Quiz 1
4	May 31-June 6	Identity and Cultural Cognition	
5	June 7-June 13	Value-orientation and Moral Foundations, Trust and Homophily	
6	June 14-June 20	Framing and Synthesis	Quiz 2
	June 12-June 27	Summer Break	
SECTION 2: APPLYING WHAT WE KNOW			
7	June 28 – July 4	Blogs and Film/Video	
8	July 5-July 11	Social Media	
9	July 12-July 18	Face to Face Communication, Synthesis	Quiz 3
SECTION 3: SOCIAL SCIENCE METHODS: NEEDS AND OUTCOMES			
10	July 19-July 25	Audience Research	
11	July 26-August 1	Evaluation	Quiz 4
SECTION 3: PUTTING IT ALL TOGETHER			
12	August 2-August 6	Synthesis and Reflection	Final Project due August 6-8
Each week: Application (5 points), 2 posts in discussion (5 points)			

Details on each module are outlined here:

<u>Part I: Making it accessible, engaging, and impactful</u>
This section will introduce science communication, discuss some of the difficulties particular to communication within the natural resources context, and discuss the different objectives of science communication. We will cover ways to make science more accessible and highlight key communication theories that can help make communication efforts more impactful. Each module will have associated videos and/or readings that will be outlined in the Canvas.

Week 1: Introduction
- Read through your syllabus
- Learn about the importance of audience and goals

Week 2: Language and Story
Jargon
- Learn about jargon and get some tools to help you de-jargonize your communication
Story
- Cover the "power of story" and a framework you can use for storytelling

Week 3: Introduction to communication theories: knowledge deficit model and mental models
Knowledge-Deficit
- Learn about the knowledge-deficit model and why it doesn't always work
Mental Models
- Understand mental models, confirmation bias, and their role in how we receive and process information

Week 4. Identity and Cultural Cognition
Identity
- Reflect on personal and group identity and its role in communication
Cultural Cognition
- Learn about cultural cognition and how to navigate it in communication

Week 5. Value-orientation and moral foundations, trust and homophily
Value-orientation and moral foundations
- Learn about the role value-orientation and moral foundations play in how people react to information
Trust and homophily
- Learn about homophily and its role in communication trust

Week 6. Framing
Framing
- Learn how framing can aid communication
Synthesis
- Review all we have covered in this section

Part II: Applications of what we know.

There are many avenues to connect with members of the public and to get our science out there. This section will discuss some these that are easily accessible and commonly used by scientists at all levels, while thinking about them in the context of the theories we have learned in section I.

Week 7. One way communication-blogs and film/video

Science Blogs
- Review blogs and their impact in communication

Film/Video
- Read about and watch some examples of scientific communication through video

Week 8. Social Media
- Learn about the different social media tools and their impact in communication

Week 9. Face-to-Face
- Review face-to-face approaches in communication
- Reflect on what we have learned

Part III: Social Science Methods: Needs and Outcomes

Now that we know the many things that can affect how people interpret information, how do we assess what is going on in our own situations? And how do we evaluate the outcomes of our efforts? In this section, we will highlight some examples of quantitative and qualitative methods to assess and evaluate, and discuss approaches one could use to evaluate your own communication efforts.

Week 10. Audience research
- Learn about social science tools and how they can hep you understand communication needs

Week 11. Evaluation
- Learn about the importance of evaluation and ways that you can assess your communication outcomes

Part IV: Putting it all together

The final project will allow you to have a go at putting all we have learned together in a planned application. We will close with a synthesis discussion, and talk a bit about what everything means together and how you will use what you have learned in your own work.

Week 12. Synthesis and reflection
- Synthesize and reflect on what we have learned this semester

5 Policies and Requirements

This syllabus represents current plans and objectives for this course. As the semester progresses, changes may need to be made to accommodate timing, logistics, or to enhance learning. Such changes, communicated clearly, are not unusual and should be expected.

5.1 Late Submissions & Make-up Requests

It is the responsibility of the student to access on-line lectures, readings, quizzes, and exams and to maintain satisfactory progress in the course. Late submissions and make-up requests will be processed on an individual basis, but you MUST inform your instructor in these cases.

For computer, software compatibility, or access problems call the HELP DESK phone number—352-392-HELP = 352- 392-4357 (option 2).

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

5.2 Communication Courtesy and Professionalism

Just as in any professional environment, meaningful and constructive dialogue is expected in this class and requires a degree of mutual respect, willingness to listen, and tolerance of opposing points of view. **Respect for individual differences and alternative viewpoints will be maintained in this class at all times.** All members of the class are expected to follow rules of common courtesy, decency, and civility in all interactions. Failure to do so will not be tolerated and may result in loss of participation points and/or referral to the Dean of Students' Office.

5.3 Semester Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning.
At approximately the mid-point of the semester, the School of Forest, Fisheries, & Geomatics Sciences will request anonymous feedback on student satisfaction on various aspects of this course. These surveys will be sent out through Canvas and are not required but encouraged. This is not the UF Faculty Evaluation!
At the end of the semester, students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

5.4 Academic Honesty Policy

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 them 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 or 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: http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code.

5.5 Inclusive Learning Environment

This course embraces the University of Florida's Non-Discrimination Policy, which reads,
> *The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act.*

If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see the instructor or refer to the Office of Multicultural & Diversity Affairs website: http://multicultural.ufl.edu.

5.6 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/

5.7 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.

6 Campus Helping Resources

For issues with technical difficulties for e-learning in Canvas, please post your question to the Technical Help Discussion in your course, or contact the UF Help Desk at:

- Learning-support@ufl.edu | (352) 392-HELP - select option 2 | http://elearning.ufl.edu
- Library Help Desk support http://cms.uflib.ufl.edu/ask
- SFFGS Academic Hub https://ufl.instructure.com/courses/303721

6.1 Student Life, Wellness, and Counseling Help

Students experiencing crises or personal problems that interfere with their general well-being 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.

- Counseling and Wellness resources http://www.counseling.ufl.edu/cwc/
- U Matter, We Care http://www.umatter.ufl.edu/
- Career Connections Center http://career.ufl.edu/
- Other resources are available at http://www.distance.ufl.edu/getting-help for online students.

6.2 Student Complaint Process

The School of Forest, Fisheries, & Geomatics Sciences cares about your experience and we will make every effort to address course concerns. We request that our online students complete a course satisfaction survey each semester, which is a time for you to voice your thoughts on how your course is being delivered. You can also submit feedback anytime.

If you have a more urgent concern, your first point of contact should be the Academic Coordinator or the Graduate/Undergraduate Coordinator for the program offering the course. You may also submit a complaint directly to UF administration:

- Students in online courses: http://www.distance.ufl.edu/student-complaint-process
- Students in face-to-face courses: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/