

Governance of Social-Ecological Systems

EVSS 595: SPECIAL TOPICS

FALL 2021

MAYBANK 316

3:25PM - 4:40PM MW

👤 Dr. Matthew Nowlin

🔗 matthewcnowlin.com

✉ nowlinmc@cofc.edu

🗨 Office hours: [By appointment](#) (on Zoom)

COVID-19

The COVID-19 pandemic is still ongoing. **The College of Charleston requires that masks be worn while indoors and you must wear a mask at all times while in class.** Although vaccinations are currently not required, *I ask you to be respectful of the health and safety of others.* If you have not received the **COVID-19 vaccine, which is safe, free, and effective, please consider doing so immediately.** Information about the vaccine is available from the [SCDHEC website](#) and information about where and when to obtain a vaccine is also available on the SCDHEC website [vaccine locator page](#).

Course Description

Social-ecological systems are ecological systems that are linked to and affected by one or more social systems. Management and governance of such systems include a wide range of stakeholders and institutions. In this course we will examine various approaches to governing and managing these systems to make them more resilient.

This course is cross-listed with undergraduate students. As graduate students you will be expected to lead discussions throughout the semester.

This course will be *lecture* and *discussion* based. Being able to adequately participate requires you to come to class prepared by having done the assigned readings prior to class. In addition, you should be prepared to participate in class by asking questions and making informed comments that add to the class discussion. **I may call on you to answer a question or discuss your case studies or research design.**

Laptops are allowed, but discouraged. Phones should be put away during class. *I encourage you to take notes by hand, with pen and paper.* [You learn better that way.](#) I recommend taking notes using the [Cornell Method](#).

Attendance Policy

Attendance will be taken for each class session, and will be part of your course engagement grade. You are allowed to miss *two classes without penalty*. **However, do not come to class if you feel ill. Additionally, if you have been exposed to or tested positive for COVID-19, do not come to class regardless of how you feel. In those cases, I am happy to meet with you on Zoom to discuss material you missed and wave the attendance requirement. Just let me know.**

Course Goals and Learning Objectives

After taking this course student will:

- Develop an understanding of social-ecological systems.
- Articulate the challenges involved with the management of common-pool resources and social-ecological systems governance.
- Understand the role of institutions in managing the commons and in social-ecological systems governance.
- Differentiate the role that institutions and policy play in models of social-ecological systems.
- Be able to produce a recommendation to improve governance of a social-ecological system.

Required Materials

- **Books:**

- Anderies, John M., and Marco A. Janssen. 2016. *Sustaining the Commons*. 2nd ed. Tempe, AZ: Center for Behavior, Institutions, and the Environment.
 - * A pdf and eBook version of the book is available at the book's website, sustainingthecommons.org
- Ostrom, Elinor. 2005. *Understanding Institutional Diversity*. Princeton, NJ: Princeton University Press.
 - * A pdf version of the book is available on [OAKS](#)

- *Other required readings will be provided on [OAKS](#)*
- [Cases Studies of Social-Ecological Systems \(Arizona State University\)](#)

Course Requirements and Grading

Performance in this course will be evaluated on the basis of 8 short reflection papers, a case study, and course engagement.

Points will be distributed as follows:

Assignment	Possible Points
Reflection papers (8)	200 points total
Case presentations	100 points total
Research design	400 points total
Course engagement	100 points
Total	800 points

Assignments

Specific instructions for the following assignments are posted on [OAKS](#). All work must be turned in through the Assignment folder on OAKS, and is due at class time unless otherwise specified.

Reflection papers: You will write 8 short, about 2 pages, reflection papers that summarize and integrate the readings. Prompts will be given for each paper in [OAKS](#). **When assigned, reflection papers are due on Mondays at class time.**

Case presentations: Drawing on the library of SES case studies from Arizona State (or another resource) you will give two short presentations, about 10 minutes, of two different case studies of social-ecological systems. Presentation dates will be randomly assigned.

Research design: You will develop a research design using Ostrom's SES Framework. The proposed research should include *theoretical* as well as *applied* contributions to scholarly knowledge. As part of your research design you will develop a research question, perform a literature review, develop data collection procedures (e.g., survey/interview questions), state how you would analyze the data, and conclude with a discussion of the potential contribution of your proposed research if it was completed. Sections of the research design will be completed and turned in throughout the semester. The final research design should be about 20 to 25 pages. You will give a short presentation, about 15 minutes, of your research design at the end of the semester.

Course engagement: Course engagement involves coming to class prepared, having read, and ready with questions and comments.

Late Work Policy

Late work is subject to a 48-hour grace period, and after that will be penalized 10% each day (24 hr period) it is late, up to 3 days. After 3 days the assignment will not be accepted. For example, if an assignment is due Wednesday at 2:00 PM, the grace period ends on Friday at 2:00 PM and it is late as of 2:01 PM and you lose 10%. After Saturday at 2:01 PM you lose another 10%, after Sunday at 2:01 PM another 10%, and no work will be accepted after Monday at 2:00 PM. *No late work will accepted 72 hrs after the assignment due date and time.*

Grading Scale

There are **800** possible points for this course. Grades will be allocated based on your earned points and calculated as a percentage of **800**. A: 94 to 100%; A-: 90 to 93%; B+: 87 to 89%; B: 83 to 86%; B-: 80 to 82%; C+: 77 to 79%; C: 73 to 76%; C-: 70 to 72%; D+: 67 to 69%; D: 63 to 67%; D-: 60 to 62%; F: 59% and below

Course Schedule

Subject To Change. Changes will be announced in class, through email, and on the [OAKS](#) course page.

All readings listed under *Readings* below are required. Readings will be made available on [OAKS](#) and can be found under Content -> Readings for each week.

Books

- **AJ:** Anderies, John M., and Marco A. Janssen. 2016. *Sustaining the Commons*. Tempe, AZ: Center for Behavior, Institutions, and the Environment.
- **Ostrom:** Ostrom, Elinor. 2005. *Understanding Institutional Diversity*. Princeton, NJ: Princeton University Press.

Articles

You will be reading several peer-reviewed academic journal articles. *These will be made available as pdfs on [OAKS](#).* In addition, you will be required to find several journal articles on your own related to your research project.

Links

I also provide several links to web based sources. You can access these sources through the links on the syllabus or through [OAKS](#).

Aug 23-Aug 25: Course Introduction and Overview

- *Readings:*
 - **SKIM** Cox, Michael. 2019. “Using the Ostrom Workshop Frameworks to Study the Commons.” In Routledge Handbook of the Study of the Commons, Routledge Handbooks Online.

Aug 30-Sept 1: Common-Pool Resources

- *Readings:*
 - **AJ**, Chapter 1: *Why Study the Commons?*
 - [The Tragedy of the Commons](#)
 - Ostrom, Elinor. 2008. “The Challenge of Common-Pool Resources.” *Environment: Science and Policy for Sustainable Development* 50(4): 8–21.
- *Assignments:*
 - Reflection paper 1

Sept 6-Sept 8: Markets and Property Rights

- *Readings:*

- Keohane and Olmstead. 2007. “The Efficiency of Markets” in *Markets and the Environment*
- Anderson, Terry L. and Gary D. Libecap. 2014. “Property Rights for the Common Pool” from *Environmental Markets: A Property Rights Approach*
- Fullerton, Don, and Robert Stavins. 1998. “How Economists See the Environment.” *Nature* 395(6701): 433—434.
- Anderson, Terry L. 2004. “Donning Coase-Coloured Glasses: A Property Rights View of Natural Resource Economics.” *Australian Journal of Agricultural and Resource Economics* 48(3): 445—462.

- *Assignments:*

- Reflection paper 2

Sept 13-Sept 15: States and Regulation

- *Readings:*

- **SKIM:** Rowell, Arden, and Josephine van Zeben. 2021. *A Guide to U.S. Environmental Law*. Oakland, California: University of California Press. **Part One: Building Blocks of U.S. Environmental Law**, pgs. 3-79
- Rowell and van Zeben, Chapter 7: *Ecosystem Management*
- Pacheco-Vega, Raul. 2020. “Environmental Regulation, Governance, and Policy Instruments, 20 Years After the Stick, Carrot, and Sermon Typology.” *Journal of Environmental Policy & Planning* 22(5): 620—635.

- *Assignments:*

- **Research design part 1 DUE: Sept 15**

Sept 20-Sept 22: Institutions

- *Readings:*

- **AJ**, Chapter 2: *Defining Institutions*
- **Ostrom:** Chapter 1, *Understanding the Diversity of Structured Human Interactions*
- McGinnis, Michael D. 2011. “An Introduction to IAD and the Language of the Ostrom Workshop: A Simple Guide to a Complex Framework.” *Policy Studies Journal* 39(1): 169—183.

- *Assignments:*

- Reflection paper 3

Sept 27-Sept 29: Action Arenas

- *Readings:*
 - **AJ**, Chapter 3: *Action Arenas and Action Situations*
 - **Ostrom**: Chapter 2, *Zooming in and Linking Action Situations*
 - McGinnis, Michael D. 2011. “Networks of Adjacent Action Situations in Polycentric Governance.” *Policy Studies Journal* 39(1): 51—78.
- *Assignments:*
 - Reflection paper 3

Oct 4-Oct 6: Design Principles

- *Readings*
 - **AJ**, Chapter 7: *Design Principles to Sustain the Commons*
 - Cox, Michael, Gwen Arnold, and Sergio Villamayor Tomas. 2010. “A Review of Design Principles for Community-Based Natural Resource Management.” *Ecology and Society* 15(4).
- *Assignments:*
 - Reflection paper 4

Oct 11-Oct 13: Rules

- *Readings:*
 - AJ, Chapter 10: *Classifying Rules*
 - AJ, Chapter 11: *Rules, Norms, and Shared Strategies*
 - **SKIM Ostrom**: Chapter 5, *A Grammar of Institutions*
 - Siddiki, Saba et al. 2019. “Institutional Analysis with the Institutional Grammar.” *Policy Studies Journal*, Forthcoming.
- *Assignments:*
 - **Case study part II DUE: Oct 13**

Oct 18-Oct 20: The Social-Ecological Systems Framework

- *Readings:*
 - Ostrom, Elinor. 2009. “A General Framework for Analyzing Sustainability of Social-Ecological Systems.” *Science* 325(5939): 419—422.
 - McGinnis, Michael, and Elinor Ostrom. 2014. “Social-Ecological System Framework: Initial Changes and Continuing Challenges.” *Ecology and Society* 19(2).
- **FALL BREAK: Oct 18-19**

Oct 25-Oct 27: Systems

- *Readings:*
 - AJ, Chapter 12: *Feedbacks and Stability*
 - AJ, Chapter 13: *Coupled Infrastructure Systems*
 - Rammel, Christian, Sigrid Stagl, and Harald Wilfing. 2007. “Managing Complex Adaptive Systems – a Co-Evolutionary Perspective on Natural Resource Management.” *Ecological Economics* 63(1): 9—21.
- *Assignments:*
 - Reflection paper 5

Nov 1-Nov 3: Resilience of Social-Ecological Systems

- *Readings:*
 - Folke, Carl. 2006. “Resilience: The Emergence of a Perspective for Social-Ecological Systems Analyses.” *Global Environmental Change* 16(3): 253—267.
 - Norberg, Jon, James Wilson, Brian Walker, and Elinor Ostrom. 2008. “Diversity and Resilience of Social-Ecological Systems.” In *Complexity Theory for a Sustainable Future*, eds. Jon Norberg and Graeme S. Cumming. New York, NY: Columbia University Press, 46—79.
 - Anderies, John M., and Marco A. Janssen. 2013. “Robustness of Social-Ecological Systems: Implications for Public Policy.” *Policy Studies Journal* 41(3): 513—536.
- *Assignments:*
 - Reflection paper 6

Nov 8-Nov 10: Polycentricity

- *Readings:*
 - AJ, Chapter 14: *Think Globally, Act Locally?*
 - Ostrom, Elinor. 2010. “Polycentric Systems for Coping with Collective Action and Global Environmental Change.” *Global Environmental Change* 20(4): 550—557.
 - Lubell, Mark, and Matthew Robbins. 2021. “Adapting to Sea-Level Rise: Centralization or Decentralization in Polycentric Governance Systems?” *Policy Studies Journal*, Forthcoming.
- *Assignments:*
 - **Research design part III DUE: Nov 10**

Nov 15-Nov 17: Polycentricity and the Ecology of Games

- *Readings:*

- Berardo, Ramiro, and Mark Lubell. 2019. “The Ecology of Games as a Theory of Polycentricity: Recent Advances and Future Challenges.” *Policy Studies Journal* 47(1): 6—26.
- Lubell, Mark. 2013. “Governing Institutional Complexity: The Ecology of Games Framework.” *Policy Studies Journal* 41(3): 537—559.

- *Assignments:*

- Reflection paper 7

Nov 22-Nov 24: Conclusion

- *Readings:*

- Cox, Michael et al. 2021. “Lessons Learned from Synthetic Research Projects Based on the Ostrom Workshop Frameworks.” *Ecology and Society* 26(1).
- Villamayor-Tomas, Sergio et al. 2020. “Using Case Study Data to Understand SES Interactions: A Model-Centered Meta-Analysis of SES Framework Applications.” *Current Opinion in Environmental Sustainability* 44: 48—57.

- *Assignments:*

- Reflection paper 8

- **THANKSGIVING BREAK: Nov 24-26**

Nov 29-Dec 1: Presentations

Dec 6-Dec 8: Presentations

- **Complete Research Design DUE: Dec 6**

Important Information

Academic Integrity Statement

Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved.

Incidents where the instructor determines the student's actions are related more to a misunderstanding will be handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student's file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XXF in the course, indicating failure of the course due to academic dishonesty. This status indicator will appear on the student's transcript for two years after which the student may petition for the XX to be expunged. The F is permanent.

Students should be aware that unauthorized collaboration – working together without permission – is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others' exams, fabricating data, and giving unauthorized assistance.

Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.

Students can find the complete Honor Code and all related processes in the [Student Handbook](#)

Students with Disabilities

The College will make reasonable accommodations for persons with documented disabilities. Students should apply at the [Center for Disability Services](#) located on the first floor of the Lightsey Center, Suite 104. Students approved for accommodations are responsible for notifying me as soon as possible and for contacting me at least one week before any accommodation is needed.

Inclement Weather, Pandemic or Substantial Interruption of Instruction

If in-person classes are suspended, faculty will announce to their students a detailed plan for a change in modality to ensure the continuity of learning. All students must have access to a computer equipped with a web camera, microphone, and Internet access. Resources are available to provide students with these essential tools.

Mental and Physical Wellbeing

At the college, we take every students' mental and physical wellbeing seriously. If you find yourself experiencing physical illnesses, please reach out to student health services (843.953.5520). And if you find yourself experiencing any mental health challenges (for example, anxiety, depression, stressful life events, sleep deprivation, and/or loneliness/homesickness) please consider contacting either the Counseling Center ([professional counselors](#) or 843.953.5640 3rd Robert Scott Small Building) or the Students 4 Support (certified volunteers through texting "4support" to 839863, visit: <http://counseling.cofc.edu/cct/index.php>, or meet with them in person 3rd Floor Stern Center). These services are there for you to help you cope with difficulties you may be experiencing and to maintain optimal physical and mental health.

Food and Housing Resources

Many CofC students report experiencing food and housing insecurity. If you are facing challenges in securing food (such as not being able to afford groceries or get sufficient food to eat every day) and housing (such as lacking a safe and stable place to live), please contact the [Dean of Students](#) for support. Also, you can go to: <http://studentaffairs.cofc.edu/student-food-housing-insecurity/index.php> to learn about food and housing assistance that is available to you. In addition, there are several resources on and off campus to help. You can visit the Cougar Pantry in the Stern Center (2nd floor), a student-run food pantry that provides dry-goods and hygiene products at no charge to any student in need. Please also consider reaching out to Professor ABC if you are comfortable in doing so.

Center for Student Learning

I encourage you to utilize the Center for Student Learning's (CSL) academic support services for assistance in study strategies and course content. They offer tutoring, Supplemental Instruction, study skills appointments, and workshops. Students of all abilities have become more successful using these programs throughout their academic career and the services are available to you at no additional cost. For more information regarding these services please visit the [CSL](#) or call (843) 953-5635.

I encourage you to take advantage of the Writing Lab in the Center for Student Learning (Addlestone Library, first floor). Trained writing consultants can help with writing for all courses; they offer one-to-one consultations that address everything from brainstorming and developing ideas to crafting strong sentences and documenting sources. For more information, please call 843.953.5635 or visit: <http://csl.cofc.edu/labs/writing-lab/>.

Religious Accommodation for Students

It is the policy of the College to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required class work that may fall on religious holidays. Please see me immediately if you will need to miss class any time during this semester.