

**FSEM 100 Feeding the World Sustainably**

2 Units

**Fall 2023**

**Tuesday 2.00 pm-3.50 pm**

**Location:** ZHS 130

**Instructor:** Sarah Feakins

**Office:** ZHS 223F

**Office hours:** drop in or by appointment

**Contact Info:** [feakins@usc.edu](mailto:feakins@usc.edu)

## Course Description

**What is a Freshman Seminar?** From <https://dornsife.usc.edu/fsem>:

In the Freshman Seminar Program, students learn the excitement of intellectual inquiry by participating once a week for eleven weeks in a two-hour seminar on a topic of personal interest both to the seminar leader who has chosen to offer the topic and to the students who have elected to enroll. Each seminar is limited to eighteen freshmen, who earn two units of elective credit on a CREDIT / NO CREDIT basis. While the workload is less than a regular four-unit course, journals, papers, group projects, or individual presentations are often required in addition to the reading and participation in seminar discussions.

Freshman Seminars are offered both in the Fall and Spring terms. Class information is printed in the Schedule of Classes under "Freshman Seminars." Freshman may earn credit for two different topics, one in the Fall and another in the Spring of their freshman year. By doing so, incoming students learn how to study in a seminar setting, acquire the expectations of academic culture, and meet a group of other freshmen who take their education seriously.

**What topic does this FSEM explore?**

## Feeding the World Sustainably

This course seeks to know what our food production entails and to scope the most promising ideas for positive transformations in our lifetimes toward sustainability goals. Our learning will be guided by the latest developments from academic research, investigative journalism and innovative businesses operating locally and globally. In this seminar, you are invited to address fundamental problems with our existing approaches to food production from habitat and biodiversity loss, to soil erosion and dwindling fossil groundwater, to pollution, methane emissions and climate effects. Fortunately, given humanity's hunger, we're highly motivated to seek solutions. From proven ideas to new breakthroughs, we'll explore the most promising avenues for changes toward a more sustainable food system. These are important issues – vital for life on earth, the climate system and our own healthy future.

**Your instructor, Professor Sarah Feakins** is in the Department of Earth Sciences in the USC Dornsife College of Letters, Arts and Sciences. She received her Ph.D. in Earth Sciences from Columbia University and her undergraduate degree in Geography from the University of Oxford. For the last 15 years she has run the leaf wax laboratory at USC and her research program seeks to understand fundamentals of plant biogeochemistry and to reconstruct the landscapes of past warm climate states. She has several recent research publications on water use efficiency in wheat, and has trained students who are now working in the food industry – including viticulture and plant based 'meat'.

## Learning Objectives

- Students will learn to acquire and communicate scientific data, ideas, and interpretations through written, oral, visual, and digital means.
- Students will demonstrate the ability to accurately report on and draw conclusions from careful readings of works of scientific journalism and research literature.
- Students will present on the topical questions, methods, data and interpretations.
- Students will demonstrate the ability to accurately and ethically incorporate and cite a variety of scholarly sources in their written reports and oral presentations, and will evaluate the relative reliability of sources of information and between peer-reviewed, and other publishing.
- Students will learn about opportunities for coursework and research in the earth sciences
- This course will introduce students to the norms of scientific communication within college writing, academic research and technical careers.

**Course Schedule:**

**\*\*\*FSEM course meets for 11 weeks\*\*\***

USC Wk	Date	Topic	Class Session Activity Type	Readings and Homework	Deliverables
1	Aug 22	<b>Intro, grain in the news</b>	Introduction to food production, food security, in the news	Reading in content area of blackboard, to read before class	Build familiarity with informative news sources and current affairs
2	Aug 29	<b>Meat production</b>	Transformation of the natural world, animal farming and alternatives	Instructor assigned	Use and discuss interactive data viewers in teams
3	Sep 5	<b>Various, student interest</b>	Student-led discussions of issues in the news	Locate a news article of interest	Share your topic with class
4	Sep 12	<b>Case study Chocolate</b>	Example crop and issues	Instructor assigned	Understand a case study in depth
5	Sep 19	<b>Various, student interest</b>	Student-led discussions, focus on companies and organizations	Locate a gov, NGO or corporate website source of interest to you	Share your chosen corporate sector web resource on Blackboard, be ready to introduce it to us at the next class
6	Sep 26	<b>Intro to USC research</b>	Lab tours in the Earth Sciences and Biological Sciences – Prof Feakins’ and other labs, including the Agilent Center of Excellence for Biomolecular Characterization	Read instructor provided resources on how to get involved at USC and beyond	Explore academic research internship opportunities, lab safety training instructions etc
7	Oct 3	<b>Soil health</b>	Academic articles: finding and citing references	Instructor assigned academic articles	Familiarity with academic publications, read an article
8	Oct 10	<b>Water availability</b>	Discuss scientific article and data	Instructor assigned academic article	Learn how to mine articles for information
9	Oct 17	<b>Climate change</b>	Collaborate to make slides and present in class, professional skills	Read NCA4 in class to distill key information for assigned task	Understand how regional climate change affects agriculture and how to source, distill and target information to an audience.
10	Oct 24	<b>Biodiversity</b>	Professor guided tour the NMHLA exhibits	Explore the museum website	Learn about biodiversity, local vegetation, urban environments, evolution and extinction: dinosaurs, large mammals and human ancestors.
11	Oct 31	<b>Take-aways</b>	Develop a summary for friends/family	News article: 8 billion and the baby gap	Share reading/viewing tip with class/friends/family.

## Administrative Details

**Recommended Preparation:** No pre/co-requisites.

**Technology Use:** Class materials are posted on Blackboard, or located by students on the web.

**Technological Proficiency and Hardware/Software Required:** You will need access to a computer and to standard Microsoft Office software: Word, Excel and Powerpoint. You will need access (within teams) to a smart phone with video and audio recording capability. Students can download the MS Office package free through USC if they don't already have it: <https://itservices.usc.edu/officestudents/>

**Required Readings and Supplementary Materials** Readings will be provided and/or located by students from the web or using database software via USC libraries and shared via Blackboard.

**Description of Assignments** This seminar course will include active in class engagement in various media and associated discussion. See schedule for components, additional instructions in class. Activities teach the various research and presentation learning objectives. **Class Participation:** This coursework centers on active participation in learning, it is not a lecture-based course. While I hope you will attend and participate in every class session, participation activities (presentations and discussions in class and on blackboard) earn course credit. If you miss a class, to keep up with the course complete the reading/viewing in the content area, and provide make-up contribution similar to that assigned for the live class, e.g., post on the discussion board or email the professor your contribution, or present at the next class.

**Credit/no credit** This course is not assessed with letter grades. Course credit will be achieved through active participation in activities in ten class sessions (out of 11 total). If you miss more than 1/11 classes please make sure to keep up with the course material and produce make up work in a timely manner.

**How to attend** Completing assignments on time is key to staying on track with learning and building successful skills for coursework and careers. However, extensions or replacement assignments may be requested, for university sanctioned absence (athletes) or illness, by emailing the professor in advance. This class requires active participation by all students. Text messaging, email, social media use, or web-browsing, is not permitted in class except where required for in-class work. Turning your cell phone off and taking notes only with a notebook, may be good strategies, if you find this hard advice to follow.

## Technology and Learning Environment

### USC technology rental program

If you need resources to successfully participate in your classes, such as a laptop, you may be eligible for the [USC Computing Center Laptop Loaner Program](#).

### FSEM Classroom Norms

Endeavor to arrive to class on time and to listen attentively and respectfully, participate in class activities and contribute to classroom discussions. Consider your contributions to foster a respectful and inclusive environment, see helpful guidance from CET on [discussion norms](#).

**FSEM Zoom etiquette/tips** *We expect in person classes, Zoom if needed. On Zoom, please mute your microphone when not speaking. Unintended audio can be disruptive. Recommend camera on in small classes to facilitate discussion and a collegial learning experience; request camera on when speaking.* Please connect to class Zoom with a computer browser whenever possible, if you have connectivity issues and need to use a phone to dial into class, there may be admit issues, unless you email the instructor in advance. Viewing course materials and submitting assignments requires an internet connection. If you have connectivity or other issues, or other needs for accommodation, please reach out to the instructor outside of the class session. Any immediate issues (e.g., sound quality is unclear, or the font is too small) please raise (e.g. in the chat) for a prompt solution.

**No sharing of course materials outside of the USC learning environment**

Students please note that USC has a policy that prohibits sharing of any synchronous and asynchronous course content outside of the learning environment:

*SCampus Section 11.12(B) Distribution or use of notes or recordings based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study is a violation of the USC Student Conduct Code. This includes, but is not limited to, providing materials for distribution by services publishing class notes. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the Internet or via any other media. (See Section C.1 Class Notes Policy).*

## Academic Integrity (updated on 8.17.2023)

### *Academic Integrity*

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct is in contrast to the university's mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the [USC Student Handbook](#). All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see the [student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask me if you are unsure about what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

Collaboration. In this class, you are expected to submit work that demonstrates your individual mastery of the course concepts. Group work. Unless specifically designated as a 'group project,' all assignments are expected to be completed individually.

If found responsible for an academic violation, students may be assigned university outcomes, such as suspension or expulsion from the university, and grade penalties, such as "no credit" on the assignment, and/or the course.

### *Course Content Distribution and Synchronous Session Recordings Policies*

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the internet, or via any other media. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

## **Statement on Academic Conduct and Support Systems**

### **Academic Integrity:**

The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, comprises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see [the student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

### **AI Generators are not permitted in this course:**

Since developing and demonstrating analytical and critical thinking skills are assessed learning outcomes of this course, all assignments should be prepared by the student. Students may not have another person or entity (including AI such as ChatGPT) assist with any portion of the assigned coursework including assessments. Completing coursework by actively thinking and completing the work yourself is essential to learning. Developing strong competencies in thinking and learning is the function of a university education and will prepare you for a competitive workplace. Any use of AI tools is prohibited in this course, will be identified as plagiarism, and will be reported to the Office of Academic Integrity.

### **Students and Disability Accommodations:**

USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at [osas.usc.edu](https://osas.usc.edu). You may contact OSAS at (213) 740-0776 or via email at [osasfrontdesk@usc.edu](mailto:osasfrontdesk@usc.edu).

### **Support Systems:**

[Counseling and Mental Health](#) - (213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

[988 Suicide and Crisis Lifeline](#) - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services \(RSVP\)](#) - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#) - (213) 740-5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-5086 or (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#) - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call

Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or [otfp@med.usc.edu](mailto:otfp@med.usc.edu)

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.