

Faculty Members

Jeffrey Kelly
Oklahoma Biological Survey

Eli Bridge
Oklahoma Biological Survey

Kirsten de Beurs & Jennifer Koch
Geography & Environmental Sustainability

Amy McGovern
Computer Science

Phillip Chilson
Meteorology

Justin Reedy
Communication

Lori L. Jervis
Anthropology

OU Advisory Committee

Kyle Harper - Senior Vice President and Provost

Kelvin Droegemeier - Vice President for Research

Lee Williams - Dean of the Graduate College

Ingo Schlupp - Associate Dean of the College of Arts and Sciences

Jim Sluss - Associate Dean of the College of Engineering



For More Information, Please Contact:

Sara Mata, Ph.D.

NSF NRT Program Coordinator

University of Oklahoma

Oklahoma Biological Survey

111 Chesapeake St.

Norman, OK 73019

Email: sara.mata@ou.edu

Phone: [\(405\) 325-1985](tel:4053251985)



Earth Observation Science for Society and Sustainability (EOS³) Graduate Certificate Program



Overview

Earth Observation Science for Society and Sustainability (EOS³) is an interdisciplinary graduate certificate program consisting of a four-course sequence. The certificate will emphasize integration of natural and social sciences approaches to data exploration and visualization while building student competency in interdisciplinary team leadership and communication.

The EOS³ certificate intends to produce graduates who are the best in their area of expertise with an overview of effective research skills across disciplines. These transformative interdisciplinary research efforts prepare students to engage with real research, development, and innovation with government and private industries, providing an increased marketability in both academic and nonacademic careers.



Why should you get an EOS³ certificate?

-Learn interdisciplinary skills
working with instructors and students from diverse departments.

-Build your resume
coursework emphasizing tangible skills contribute to interdisciplinary team efforts.

-Acquire analytical skills
with instruction on and engagement with “big data” concepts.

-Make a difference NOW
help solve real-world sustainability challenges requiring interdisciplinary teamwork.

Courses

Fall Semester

* **Interdisciplinary EOS³**

Focus on three broad goals:
(1) Immerse students in the interdisciplinary complexities that characterize grand societal challenges of connecting big data generated through Earth observation science to sustainability; (2) Build student competency in engaging with interdisciplinary teams to address common questions; and (3) Enhance student competency in team science to include development of skills in leadership, communication, big data, and consensus building.

* **EOS³ Data Analytics**

Focus on applying large, open-source civil Earth observation and other geospatial data to address interdisciplinary science question. Will introduce various open-source data tools for acquiring, managing, and analyzing large public data sets. Work in interdisciplinary teams to fuse disparate data and conduct analyses that meld ideas from natural and social science disciplines. Teams will be comprised of members with varied skill sets to establish a culture of collaborative teaching and learning.

Spring Semester

* **EOS³ Interface**

Focus on interdisciplinary communication, application of group communication theories to team science, scholarship and communication of science across societal and cultural gaps. Will cover how interdisciplinary teams can better communicate and collaborate, particularly focusing on the science of “team science,” and bridging of gaps between disparate fields, such as the life sciences, computer science, and the social sciences. Will discuss how socio-cultural differences affect communication, specifically how those affect the communication of scientific and technical information across disciplines and to the public and policymakers.

* **EOS³ Practicum**

The EOS³ practicum is the culminate of the certificate program and will provide opportunities to apply what has been learned in the coursework while working as part of a collaborative and interdisciplinary team addressing real world research topics relating to EOS³.

Certificate-seeking students will participate in all four courses as a cohort; building relationships and community through the process of learning and doing team science.