

Sustainability for all

Strategic Plan Theme: Stewardship and Sustainability

Funding Level: Below \$1 million

Facility Needs: Adjustments to existing facilities will be needed

Submitting Unit: Community Sustainability

Collaborating colleges/departments/units involved with this proposal.

Office of Sustainability – MSU Office of Sustainability • Community Sustainability • Center for Community and Engaged Learning • MSU Science Gallery – CO-Lab/MSU Museum

What is the proposal’s big theme or idea?

This proposal is designed to provide every undergraduate student with a foundational understanding of sustainability while advancing student capacity to address global environmental challenges using the sustainability platform. To do so, it is proposed that MSU implements a required academic course where students would enroll in and complete an in-person 3-credit course (CSUS100 – Our World) during their undergraduate program at MSU.

Currently, scientists around the world have significant concern for long-term increases in mean global temperature (Valipour et al., 2021), CO₂ (Baker et al., 2018) and sea levels (Frederikse et al., 2020) as major challenges to the human civilization. Further, scientists indicate that these major changes will affect millions of individuals and their current ways of living over the next several decades (Hooijer & Vernimmen, 2021). Given the implications of these findings, the Spartan community has a great opportunity, and one might argue, an obligation to provide a better Earth for future generations. As such, current students should understand the implications, impacts, and potential ways to mitigate these grand challenges. The institution should help future alumni of the University be the voice for “Our World” through the better understanding of social, economic, and environmental impacts. This proposal seeks to provide that opportunity.

What is the proposal’s goal?

The goal of this proposal includes the development and implementation of an introductory sustainability course (CSUS100) entitled “Our World” for Fall Semester 2024. The course would be framed in a large lecture approach (online and in-person lectures) along with smaller recitation sections. The course would be framed around the three pillars of sustainability (social, economic, and environmental), whereas, upon conclusion of the course, MSU undergraduates would be able to:

1. Define and describe sustainability and sustainable development,
2. Identify how sustainability occurs on the University campus,
3. Identify and assess environmental challenges and opportunities to sustainable systems,
4. Identify and assess economic challenges and opportunities to sustainable systems,
5. Identify and assess societal challenges and opportunities to sustainable systems,
6. Determine how diversity, equity, and inclusion can improve sustainable growth,
7. Apply concepts of environmental justice to sustainable systems,
8. Use information technologies to improve and develop sustainable systems, and
9. Evaluate scientific knowledge and policy.

Define the significance, or impact of your big idea.

The impact of this proposal will be significant to both the University and undergraduate student community. From the University perspective, this will require faculty of the institution to reframe requirements of undergraduate education while placing a focus on the human-earth system interactions. Additionally, this will require significant resources in terms of faculty and graduate-student funding to provide the required curricular needs for undergraduate student success.

The impact to our students will be significant. This course will change institutional undergraduate curriculum to include and require a sustainability course. All MSU undergraduates will be able to define and describe the core tenets of sustainability and sustainable development in relation to the MSU community. Additionally, this course will bring together students across disciplines, departments, and colleges to learn from each other and collaborate on wicked problems. This diversity of classroom composition will enhance student experiences and enrich potential solutions to real-world problems regarding global environmental and sustainability challenges.

To measure changing sustainability worldviews and impacts over time, a pre-/post- survey will be administered to all students in all course sections using the New Ecological Paradigm (Everett & Raven, 2019).

Who will be impacted?

All undergraduate students at Michigan State University will be impacted by this proposal. Additionally, the Department of Community Sustainability will be the academic “home” for this proposal, therefore appropriate allocation of financial resources and personnel will need to be considered. This course will also generate revenue to reinvest in the proposed course, and weill as MSU’s overall sustainability efforts. Finally, appropriate University personnel will need to consider a large lecture, multi-section course configuration (40 sections x 200 students = 8000 undergraduates annually).

What does sustainability for your proposal look like?

The United National defines 17 goals for sustainable development across the globe (www.sdgs.un.org). These goals are consistent with the core tenets as described above in the goals for this proposed course. As such, positively impacting global populations within the realm of the 17 goals as described by the U.N. places our students in a position to become change agents for the future. With an estimated 8,000 students learning and applying course curriculum on an annual basis, the sustainability impact will be exponential over time. As the planet continues to address increases in global temperature, CO₂, and sea levels, increasing the number of individuals who have a collective knowledge and goals consistent with the UN goals for sustainable development will provide the voice needed to sustain a viable planet for generations.