University Review of Sustainability Research and Teaching on the UN Sustainable Development Goals (SDGs)



By

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Acknowledgements

<u>Office of Institutional Research</u> Dr. James Hunt, Director of Institutional Research

<u>Office of Research Development</u> Mike Mitchel, Assistant Director Research Strategy and Impact

<u>Sustainable Campus</u> Elizabeth Swiman, Director of Sustainability Gene Cilluffo, Engagement Coordinator Sina Jangjoo, Sustainability Graduate Assistant

<u>University Registrar</u> Jeremy Johnson, Associate Registrar

Additional thanks to individual faculty, staff, and students who provided input through informational interviews and continued to champion the 2030 Agenda through their work.

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Executive Summary

Florida State University (FSU) is an institution that delivers on both daring ideas and career-ready graduates. FSU aims to be a source for breakthroughs in decreasing the nation's carbon footprint, developing strategies to counter the impact of climate change, and finding sustainable approaches that foster growth while ensuring a more level playing field for all citizens. By training future leaders, scholars, workers, and professionals, FSU is uniquely positioned to prepare its community to understand and address sustainability challenges.

In response to these global threats, higher education institutions across the world are strengthening their commitment to the 2030 Agenda for Sustainable Development and the 17 United Nations (UN) Sustainable Development Goals (SDGs). Alignment with the UN SDGs supports FSU's mission and vision and provides a scope for the creation of innovative, interdisciplinary, and collaborative experiences for the FSU community.

The first-ever FSU University Review of Sustainability Research and Teaching on the UN SDGs documents a range of activities that support the full scope of the 2030 Agenda. According to an internal audit of 418 sustainability courses and 335 sustainability researchers, all 17 SDGs are represented in Florida State sustainability research and teaching. In addition, all 17 SDGs are represented in campus programming that supports the FSU community.

The first university review was developed as a Sustainable Campus initiative and is not intended to be a comprehensive report of all SDG activities. FSU's Sustainable Campus used an internal auditing process to identify and code *sustainability-related* teaching and research, which represents a fraction of all academic activity at the University. This is an initial attempt to document, share, and assess Florida State's progress towards the Global Goals.

A Student's Perspective on the SDGs

"My peers and I are passionate about making the world a better, more equitable and sustainable place, yet I sometimes struggle to find ways to get involved. These opportunities and resources exist at Florida State, but information about them is not widely shared on campus. This report lets students, faculty, staff, and the public know more about the amazing things Florida State is working on in terms of diversity, equity, and sustainability. In my opinion, this is one of the most important things that FSU can do for a more sustainable future."

- Gabriella Benacquisto

The university review process highlighted the value of the SDGs for FSU and showed that numerous individuals and units are championing the SDGs across campus. The process also demonstrated that there are emerging opportunities to connect FSU instructors, researchers, and students with external funding to help propel Florida State innovations to the national and global stage. Additionally, the university can continue to explicitly link many other areas of work to the SDGs. This university review is a first step toward deepening and expanding FSU's contributions to achieving the 2030 Agenda.

Introduction

Florida State University (FSU) is an institution that delivers on both daring ideas and career-ready graduates. As a Florida public institution, FSU values stewardship and acknowledges that what the university is learning and doing has profound value both within the state and far beyond it.

To that end, FSU aims to be a source for breakthroughs in decreasing the nation's carbon footprint, developing strategies to counter the impact of climate change, and finding sustainable approaches that foster growth while ensuring a more level playing field for all citizens (Florida State University, 2017). By training future leaders, scholars, workers, and professionals, FSU is uniquely positioned to prepare its community to understand and address sustainability challenges.

In response to these challenges, higher education institutions across the world are strengthening their commitment to the 2030 Agenda for Sustainable Development and the 17 United Nations (UN) Sustainable Development Goals (SDGs).



Figure 1 United Nations 17 Sustainable Development Goals (SDGs)

Note. From "Sustainable Development Goals (SDGs)" by the United Nations, n.d.

In 2015, all UN member states adopted the 2030 Agenda for Sustainable Development, which serves as a roadmap to help current and future generations enjoy peace and prosperity for both people and the planet (United Nations, n.d.). The 17 SDGs require

interdisciplinary solutions to complex challenges such as poverty reduction, improvements in health and education, and the fostering of economic growth. At the same time, the goals encourage entrepreneurial and innovative problem solving to address climate change and resource preservation (United Nations, n.d.).

A Student's Perspective on the SDGs By Gabriella Benacquisto

As a former undergraduate and current graduate student, I, like many other students, am always looking for ways to get involved in sustainability initiatives and connect with others who want to make a difference. My peers and I are passionate about making the world a better, more equitable and sustainable place, yet I sometimes struggle to find ways to get involved. These opportunities and resources exist at Florida State, but information about them is not widely shared on campus.

Resources like this report are incredibly useful for empowering the FSU community to get involved with the Sustainable Development Goals and sparking positive change for the future. This report lets students, faculty, staff, and the public know more about the amazing things Florida State is working on in terms of diversity, equity, and sustainability. In my opinion, this is one of the most important things that FSU can do for a more sustainable future.

This report is a great first step towards broadening opportunities for students, staff, and faculty to get involved with the SDGs. But FSU's efforts towards sustainability should not end here. This report should be updated and shared throughout campus every year, and we as a campus community should explore ways that we can work together to harness the full power of the SDGs.

Alignment with the UN SDGs supports FSU's mission and vision and provides a scope for the creation of innovative, interdisciplinary, and collaborative experiences for the FSU community. Specifically, FSU's expanded engagement with the SDGs is supported by a number of factors:

First, FSU is committed to encouraging and incentivizing high-impact, interdisciplinary and inter-college initiatives that address pressing societal issues (Florida State University, 2017, p. 10). Through alignment with the SDGs, FSU can pursue 17 broad thematic areas in which to develop new programs and interdisciplinary faculty hiring initiatives. In addition, FSU can enhance the leadership and coordination of interdisciplinary programs and activities through an internationally recognized framework. Second, FSU aims to expand its global footprint and foster a culturally rich learning environment on campus (Florida State University, 2017, p. 11). Alignment with the SDGs would allow FSU to join an international community of higher education institutions that are driving progress towards the global goals. This would also provide new opportunities for faculty development initiatives that foster international engagement and provide the foundation for new opportunities for students to develop global awareness.

Third, FSU is dedicated to incorporating sustainable living practices into all FSU activities. Through curricular, co-curricular, service, and research initiatives, the university is committed to incorporating practices that reduce its overall footprint and build a University-wide culture of environmental care. Alignment with the SDGs supports this pledge as local actions that are taken to advance climate action, waste minimization, and resource stewardship ultimately help to shape the future of our state and society.

About Florida State University

Florida State University's history began in 1823, making the campus the oldest continuous site of higher education in Florida (Florida State University, n.d.-c). Today, FSU is one of the nation's elite research universities, disseminating knowledge in the sciences, technology, arts, humanities, and professions.

FSU is a public institution, ranking among the Top 20 national public universities in the U.S. *News & World Report* rankings (Farnum-Patronis, 2021). FSU has highly-ranked academic programs within eighteen colleges, offering 283 bachelor's, master's, doctoral, specialist, and professional degree programs. In the 2021-22 academic year, FSU had 45,493 students from every Florida county and 130 countries in addition to 14,226 total employees, including 2,594 traditional faculty (Florida State University, n.d.-a).

FSU is a Carnegie Research I institution and only one of two higher education institutions in Florida to be designated a Preeminent University by the state legislature (Florida State University, 2017). FSU's research expenditures totaled \$328,604,766 for FY 2021, and Florida State consistently ranks in the top 10 universities nationally in physical sciences grants awarded by the National Science Foundation (NSF) (Florida State University, n.d.-b).

The FSU campus includes 383 buildings on 1,716 acres. The main campus in Tallahassee sits on 487 acres (Florida State University, n.d.-a). FSU's National High Magnetic Field Laboratory (MagLab) is the largest and highestpowered magnet laboratory in the world (Florida State University, 2017).

FSU strives to meet sustainability commitments set out in *The Future is Florida State*: Florida State University

FSU Rankings

- FSU is <u>number 19 in the</u> <u>latest U.S. News & World</u> <u>Report rankings</u>. 2021 marked the third consecutive year that the university placed in the Top 20.
- The Journal of Criminal Justice Education ranked Florida State's College of Criminology and Criminal Justice <u>No. 1 in the</u> <u>nation for faculty</u> <u>research</u>.
- U.S. News & World Report's, "Best Graduate Schools," 2021 edition ranks the <u>School of</u> <u>Information's school</u> <u>library media program</u> <u>No. 1.</u>
- College Choice ranks FSU's doctoral degree program in Sport Management among <u>the</u> top programs in the nation, 2020.
- FSU's College of Motion Picture Arts is No. 13 among the nation's <u>Top</u> <u>50 Film Schools, *The*</u> <u>Wrap News, 2020</u>. The College is ranked <u>No. 15</u> in the nation by *The* <u>Hollywood Reporter,</u> <u>2021</u>.
- U.S. News & World Report ranks Florida State <u>No. 30 overall and</u> <u>No. 18 among public</u> <u>universities in its "Best</u> <u>National Universities for</u> <u>Veterans" rankings</u>.
- FSU has been

Strategic Plan, 2017-2022, and assesses sustainability performance towards those commitments. The campus also assesses sustainability performance using the Association for the Advancement of Sustainability in Higher Education's (AASHE) Sustainability Tracking, Assessment and Rating System (STARS). recognized by <u>INSIGHT</u> <u>Into Diversity magazine</u> <u>as a Diversity Champion</u> <u>in higher education</u> for the eighth consecutive year.

Alignment of the 2030 Agenda with the FSU Mission and Vision

In 2017, FSU released a 5-year strategic plan titled *The Future is Florida State*, which articulated the mission, vision, and five core values of the university. The strategic plan was the product of widespread input, reflecting open meetings, extensive discussion groups, and interviews with faculty, students, and staff from all of FSU's colleges, programs, and disciplines (Florida State University, 2017). Embodying the belief that something extraordinary is underway at FSU, the strategic plan highlights the university's responsibility to stewardship as a Florida public institution and forms a foundation for FSU's continued engagement with the 2030 Agenda.

In addition to the campus-wide strategic plan, there are other statements and plans that incorporate the SDGs across campus. While the SDGs may not be mentioned specifically in these documents, their intentions align closely with multiple SDGs and the principles that underlie the goals, such as human rights, gender equality, and participation of vulnerable and marginalized stakeholders.

FSU is committed to increasing the diversity of FSU's student body, faculty and staff and expanding and strengthening programs and initiatives that increase diversity and inclusiveness. By valuing, celebrating and leveraging the differences and similarities within the university community, FSU aims to create a fertile environment for problemsolving that is both inventive and compassionate (Florida State University, 2017).

FSU University Review on the UN Sustainable Development Goals (SDGs) Objectives and Process

As higher education institutions become more involved with implementing the SDGs, a number of institutions have completed university reviews (Goodall & Moore, 2019; Tsinghua University, 2021; University of Auckland, 2021; UC Davis, 2021). Institutions that are conducting reviews are creating new methodologies that can be adapted by other universities to track their own progress.

FSU completed this university review with the following objectives:

- Begin to **measure FSU progress** in advancing the SDGs in research and teaching,
- **Build SDG awareness and inspire involvement** among faculty, staff, and students,
- Connect FSU SDG-related programs and projects with collaborators and

funders across campus, the community, the region, and globally.

FSU's Sustainable Campus used an internal auditing process to identify *sustainability-related* teaching and research, which represents a fraction of all academic activity at the University. The first university review is not intended to be a comprehensive report of all SDG activities. Rather, this review isa first step in documenting and assessing contributions in the fields of research, teaching, and campus programming.

The first university review is not intended to be a comprehensive report of all SDG activities.

The review process and resulting analysis enables FSU to see a clearer picture of the University's strengths, synergies, and areas for further investment and effort. We encourage all university departments to undergo their own internal review to help us better update this information in the future. As the deadline for the global goals approaches, it will be critical to advance the SDGs in bold and innovative ways. This review provides important information to support these efforts.

Stages of the FSU Process

Timeframe	Event
September 2019	 Began faculty informational interviews, asking specifically about sustainability-related research and teaching
June 2020	Compiled sustainability keyword list (Appendix B)
July 2020	 Began collecting information about faculty research via news channels, specifically FSU News
November 2020	 Audited selection of courses from 2018-2021 (curated by sustainability keyword list) to identify sustainability courses
February 2021	 Began faculty outreach through Collaborative Collision events
March 2021	Ran sustainability keywords through FEAS

First Stage: Inventorying Sustainability-Related Research and Teaching

	application and Pivot database, gathering faculty CVs and scanning for sustainability-related research
May 2021	 Published FSU Sustainable Course Guide on the Sustainable Campus website
June 2021	 Sent email to all faculty members included in the FSU Sustainability Research Inventory for validation
July 2021	 Sent email to all academic departments included in the FSU Sustainable Course Guide for validation
August 2021	 Published FSU Sustainability Research Inventory on the Sustainable Campus website

Second Stage: Coding Sustainability-Related Research and Teaching by SDG

Timeframe	Event
January 2022	 Two Sustainability Fellows hired; began work with Sustainable Campus Academics and Partnerships Coordinator Created FSU-specific definitions and keywords for all 17 SDGs (Appendix C) Conducted a coding test to confirm team members' reliability and validity when coding
February 2022	 Coded researchers in the FSU Sustainability Research Inventory by the 17 SDGs Created a formula to automate coding of researchers and courses by SDGs
March 2022	 Coded courses in the FSU Sustainable Course Guide by the 17 SDGs Conducted preliminary analysis and created graphics for presentation Continued working with the formula to validate its reliability and accuracy

April 2022	 Presented initial findings to the FSU Office of Research Development
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Third Stage: Analyzing and Drafting

Timeframe	Event
May 2022	 Continued conducting analysis and creating graphics for report Began researching internal and external funding sources for the 17 SDGs Began researching campus programs related to the 17 SDGs
June 2022	 Completed the first draft of the report Received feedback from the FSU Office of Research Development and Sustainable Campus

Final Stage: Completion

Timeframe	Event
July 2022	 Completed final report design and layout Finished proofreading Shared report with FSU Office of Research Development and Sustainable Campus

Methodology

The university review of research and teaching on the UN SDGs is based on both qualitative and quantitative data obtained from a combination of desk research, informational interviews, and targeted outreach. The review team consisted of one full time Sustainable Campus staff member and three graduate student Sustainability Fellows.

FSU made the decision to address all 17 SDGs in the first university review in order to take into account the breadth of research and teaching across the 2030 Agenda. The review cannot be completely comprehensive due to the multitude of individuals, departments, and units across the campus. However, this document offers a first glimpse into FSU engagement with the 2030 Agenda by identifying, categorizing, and analyzing SDG-related sustainability research and teaching at Florida State. The findings and observations presented in this report are based on available data that could be assessed during the 2020-2022 academic years.

The review process included outreach to the following:

- Faculty, researchers, scholars
- Staff
- Campus units (departments, institutes, centers)

Data Collection for Research and Courses

The review team assessed relevant literature on conducting university SDG reviews. The team decided to benchmark measures for SDG activity by utilizing existing datasets and developing new ones through desk research, informational interviews, and mapping using a curated list of SDG keywords.

The review methodology focused on two key areas of work. These are listed below with their associated data sources:

- **Research:** University communications channels, the Faculty Expertise and Advancement System (FEAS) application, the Pivot database, and Collaborative Collision events
- **Teaching:** Course listings (2018-2020) from the FSU Office of the University Registrar filtered by a curated list of SDG keywords with validation from individual academic units/departments

A more detailed explanation of the review methodology and data sources is provided in Appendix A.

Key Findings and Next Steps

Key Findings

- FSU is currently engaged in a broad range of activities that support the full scope of the 2030 Agenda. According to an internal audit of 418 sustainability courses and 335 sustainability researchers, all 17 SDGs are represented in Florida State research, teaching, and campus programming that supports the FSU community.
- 16 of the 17 Florida State colleges have a sustainability-related course or researcher that addresses at least one of the SDGs. As demonstrated in Figure 2, the College of Education and the College of Social Sciences and Public Policy addressed all 17 SDGs through their sustainability courses and sustainability research. However, the College of Motion Picture Arts was not found to address any SDGs through its sustainability teaching or research.
- FSU sustainability courses most frequently addressed SDG 11: Sustainable Cities and Communities. Other frequently addressed goals included SDG 16: Peace, Justice, and Strong Institutions, SDG 8: Economic Growth, and SDG 13: Climate Action.
- FSU sustainability researchers most frequently addressed SDG 13: Climate Action. Other frequently addressed goals included SDG 11: Sustainable Cities and Communities, SDG 10: Reduced Inequalities, SDG 14: Life Below Water, and SDG 3: Good Health and Well-Being.
- The university review process revealed the difficulties of creating a comprehensive picture of SDG efforts across a large research university. FSU's Sustainable Campus used an internal auditing process to identify sustainability-related teaching and research, which represents a fraction of all academic activity at the University. Replicating this process on a larger scale would require new data collection tools, innovative automation methods, and additional staff resources.

Figure 2: Number of SDGs Addressed by FSU Colleges

The College of Education and the College of Social Sciences and Public Policy addressed all 17 SDGs through their sustainability courses and sustainability research. However, the College of Motion Picture Arts was not found to address any SDGs through its sustainability teaching or research.



Number of SDGs Addressed by FSU Colleges

Figure 3: The Number of FSU Sustainability Courses Addressing SDGs

SDG 11: Sustainable Cities and Communities was addressed by the highest number of sustainability courses, followed by SDG 16: Peace, Justice, and Strong Institutions, SDG 8: Economic Growth, and SDG 13: Climate Action.



Sustainability Courses that Address SDGs

Sustainable Development Goal

Note. Some sustainability courses addressed more than one SDG and are counted more than once. *Source:* FSU Sustainable Course Guide 2018-2020

Figure 4: The Number of FSU Sustainability Researchers Addressing SDGs in their Publications and Projects

SDG 13: Climate Action was addressed by the highest number of sustainability researchers in their publications and projects, followed by SDG 11: Sustainable Cities and Communities, SDG 10: Reduced Inequalities, SDG 14: Life Below Water, and SDG 3: Good Health and Well-Being.



Sustainability Researchers that Address SDGs

Note. Some sustainability researchers addressed more than one SDG in their publication(s) and/or project(s) and are counted more than once.

Source: FSU Sustainability Research Inventory

Recommended Next Steps for FSU

- Continue to maintain updated sustainability inventories of courses and researchers. The Sustainable Campus team should continue to add new courses and researchers to sustainability inventories and remove outdated information so that these resources remain relevant. Each year, a dedicated staff member should review a list of new courses and researchers, determine which are sustainability-focused and/or -related, and categorize them by SDG. Updates can also be made on a rolling basis during the year as new information becomes available.
- **Publish an annual university review on the UN SDGs.** The Sustainable Campus team should continue to publish annual reviews of research and teaching on the UN SDGs. Over time, these reviews will allow the campus community to see where progress is being made and other areas for improvement.
- Expand the university review to all courses, researchers, campus programs, and operations. In order to view a more complete picture of FSU's contribution to the SDGs, the Sustainable Campus team should expand this methodology to *all* courses and researchers at Florida State. In addition, the Sustainable Campus team should examine the full range of campus programming and operations to identify additional ways FSU is aligned with the 2030 Agenda.
- Identify and utilize additional research strategies. Broadening the scope of the university review will require new data collection tools, innovative automation methods, and additional staff resources. For example, researchers and instructors could be asked to self-identify their research and/or courses as "sustainability-related" through a survey. They could also self-identify which SDG they feel best aligns with their work. This survey could be integrated into current course proposal systems and/or new faculty orientation in order to automate data collection and continuously update existing databases.
- Provide incentives to encourage more interaction with the SDGs. FSU could provide funding or additional resources for researchers or instructors who integrate the SDGs into their work, particularly goals that are not frequently addressed in sustainability research and teaching. Incentives could take the form of small grants, faculty workshops, and/or Collaborative Collision events.

- Create an interactive dashboard displaying FSU alignment with the SDGs. The FSU Sustainability Research Inventory and the FSU Sustainable Course Guide are currently housed in static Excel documents. Displaying the data in a more user-friendly way could promote greater engagement with the SDGs and collaboration amongst researchers and instructors. FSU could utilize software such as Power BI to create an interactive web page where the Florida State community could easily filter through data to find courses and researchers that address particular SDGs.
- Celebrate the sustainability achievements of FSU instructors and researchers. Amplify and recognize the projects and initiatives that are directly contributing to the SDGs through storytelling, events, and other communication channels.
- Consider new formats for interdisciplinary collaboration centered around individual SDGs. More research is needed to identify new formats for cross-disciplinary collaboration around the 2030 Agenda, such as formal institutes or centers, majors/minors/certificates, and/or colleges.

Individual SDG Chapters







Summary

The goal of SDG 1: No Poverty is to decrease the number of people living in poverty by 50% and completely eradicate extreme poverty for all everywhere by 2030. This includes implementing appropriate social protection systems and ensuring access to basic technological, financial, and economic resources.

SDG 1 also aims to build resilience and reduce vulnerability in cases of climate-related events and other environmental, social, and economic disasters. Ensuring the mobilization of resources and creating sound policy frameworks to support poverty eradication actions are additional targets for SDG 1.

Sustainable Campus identified 10 sustainability researchers and 39 sustainability courses relevant to SDG 1 throughout the university.

Faculty members address SDG 1 by researching poverty in relation to the Flint water crisis, the built environment, climate change impacts, and access to education, among other topics.

Students can learn more about SDG 1 through courses such as Diversity and Social Justice (SOW 4620), which focuses on the advancement of social and economic justice and human rights in national and global contexts. Other courses address SDG 1 through the lens of hospitality, educational policy, political science, nursing, African-American studies, economics, geography, international affairs, public administration, sociology, and social work.

Research

Figure 5: Number of Sustainability Researchers that Address SDG 1 by College

Four research projects and publications within the College of Fine Arts were found to be relevant to SDG 1 and the eradication of poverty around the world. Three researchers in the College of Social Sciences and Public Policy, two in the College of Education, and one in the College of Law also addressed SDG 1.





Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Jill Pable is a Professor of Interior Design & Architecture in the College of Fine Arts. Dr. Pable's work provides a practical introduction to the effective physical design of homes and other facilities that assist unhoused persons in countries identified as middle-to-high income. More information on Dr. Pable and her work can be found here.

Dr. Katrinell Davis is an Associate Professor of Sociology and African American Studies in the College of Social Sciences and Public Policy. She is a social change scholar inspired by the struggles of working-class people in urban areas who contend with extraordinary socioeconomic constraints, despite their best efforts. You can read more about Dr. Davis, including her recent work on the water crisis in Flint, Michigan, <u>here</u>.



Teaching

Figure 6: Number of Sustainability Courses that Address SDG 1 by College

The Sustainable Campus team found that 57.9% of sustainability courses (22 courses) that addressed SDG 1 were within the College of Social Science and Public Policy, and 21.1% (8 courses) were within the College of Social Work. In addition, the College of Education had four courses that addressed SDG 1; the Dedman College of Hospitality had three courses; and the College of Nursing had one course.



Number of Sustainability Courses that Address SDG 1 by College

Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Economics of Compassion (ECO 4312), an undergraduate Economics course in the College of Social Sciences and Public Policy, addresses international and domestic issues of compassionate, charitable, and philanthropic activities. By offering an economic framework from which students can critically evaluate public and private actions whose purpose is to eliminate hunger, disease, poverty or other human burdens, students can work to better understand and address SDG 1 in the future.

FSU Programs

The Unconquered Scholars Program provides support services for youth who experienced foster care, homelessness, relative care, or "Ward of the State" status. Many Scholars have faced profound hardships during childhood that may increase their risk of leaving academia without a degree. Research indicates former foster youth are far less likely to earn a degree than their non-foster care peers. Florida State University is committed to meeting the unique needs of Unconquered students so they experience the long-term professional and personal benefits associated with educational attainment (Center for Academic Retention & Enhancement, n.d.).





Summary

The goal of SDG 2: Zero Hunger is to ensure that all people, in particular people in poverty and vulnerable situations, have access to safe, nutritious and sufficient food year round by 2030. This includes eradicating all forms of malnutrition, specifically in children, women, and the elderly, as well as doubling agricultural productivity and ensuring sustainable food production systems. SDG 2 also aims to maintain the genetic diversity of seeds, correct and prevent trade restrictions, and ensure the proper functioning of the food commodity market.

Sustainable Campus identified 9 sustainability researchers and 22 sustainability courses relevant to SDG 2 throughout the university.

Faculty members address SDG 2 by researching agricultural water and soil management, food contamination, genome response in maize, and subsistence in the remote western pacific, among other topics.

Students can learn more about SDG 2 through courses such as Food and Society (HUN 2125), which examines the impact of society on human foodways and the role of food and nutrition in national development and global politics. Other departments with relevant courses include:

- Tourism
- Educational Policy
- Economics
- Geography
- Biological Science
- Anthropology

- Civil and Environmental
 Engineering
- Entrepreneurship
- Urban and Regional Planning
- Earth, Ocean, and Atmospheric Science

Research

Figure 7: Number of Sustainability Researchers that Address SDG 2 by College

The College of Arts and Sciences was found to have four sustainability researchers that addressed SDG 2 in their work. The College of Fine Arts and the FAMU-FSU College of Engineering each had two sustainability researchers, and the College of Health and Human Sciences had one.



Number of Sustainability Researchers that Address SDG 2 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Kathryn Jones is an Associate Professor of Biological Science in the College of Arts and Sciences. She focuses her research on the symbiosis between nitrogen-fixing bacteria and legume plants, an issue for farmers in the developing world. You can read more about Dr. Jones and her research <u>here</u>.

Dr. Ming Ye is a Professor of Geology and Environmental Science in the College of Arts and Sciences. He researches hydrogeology and groundwater reactive transport modeling. Dr. Ye and his team developed an ArcGIS-based Nitrogen Load Estimation Toolkit for estimating transport of nitrogen in soils from septic drainfields to the groundwater table. You can read more about Dr. Ye here.



Teaching

Figure 8: Number of Sustainability Courses that Address SDG 2 by College

The College of Social Sciences and Public Policy was found to have the most sustainability courses relevant to SDG 2 with seven courses across all departments. The College of Arts and Sciences had six courses, the College of Education had four courses, and the Jim Moran College of Entrepreneurship had two. The Dedman College of Hospitality, the College of Health and Human Sciences, and the FAMU-FSU College of Engineering each had one course.



Number of Sustainability Courses that Address SDG 2 by College

Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

The Ecology of Food (IDS 2740), an undergraduate Biological Science course in the College of Arts and Sciences, explores the basic ecology of agriculture and fisheries and considers how conventional and alternative food-production practices generate and solve ecological problems. The course focuses on several major current issues (e.g. genetically modified organisms, pollinator declines, organic agriculture, and fisheries). For each topic, students learn the science behind the issue and the social forces shaping the problem. Students also learn through discussions of scientific and popular writings, lectures, hands-on and written projects, oral presentations, local speakers and field trips.

Campus Programs

The Food for Thought Pantry is run by the Department of Student Support and Transitions for currently enrolled students who are facing food insecurity. The pantry partners with Second Harvest of the Big Bend to keep the shelves and freezers stocked (Department of Student Support and Transitions, n.d.).

The Food Recovery Network aims to eliminate food waste on campus and in the Tallahassee community. Since 2014 when the FSU chapter was formed, the Food Recovery Network has recovered over 130,000 pounds of consumable excess food from various locations around campus. This food goes directly to partner agencies, both on and off campus, who distribute it to individuals and families experiencing food insecurity (Sustainable Campus, n.d.-a).

Round Up for FSU was launched by Florida State University's Office of Business Services in July 2016, and partnered with the Student Government Association in August 2019. Round Up for FSU gives customers at specific campus retail locations the opportunity to "Round Up" their purchases to the nearest quarter (25ϕ). The difference is automatically donated to the Food For Thought Pantry (Office of Business Services, n.d.).

The Seminole Organic Garden is a shared space amongst organizations and individuals across campus. Students and staff can get involved with the garden by attending Garden Work Hours or renting a garden bed (Sustainable Campus, n.d.-b).





Summary

The goal of SDG 3: Good Health and Well-Being is to ensure healthy lives and promote well-being for everyone at all ages. Specific targets include:

- Reducing the global maternal mortality ratio;
- Reducing premature mortality from non-communicable diseases and road traffic accidents; and
- Reducing the number of deaths and illnesses from hazardous chemicals and pollution.

SDG 3 also aims to end preventable deaths of newborns and children and epidemics of communicable diseases. The prevention and treatment of substance abuse, access to sexual and reproductive health-care services, achieving universal health coverage, and vaccine research and development are also targets under SDG 3.

Sustainable Campus identified 55 sustainability researchers and 52 sustainability courses relevant to SDG 3 throughout the university.

Faculty members address SDG 3 by researching topics such as undocumented migrants' access to health services, church-based weight management programs, health disparities in people of color, and telehealth, among other topics.

Students can learn more about SDG 3 through courses in the departments of Urban and Regional Planning, Sociology, Public Health, Public Administration and Policy, Geography, Nursing, Medicine, Civil and Environmental Engineering, Interdisciplinary Health Sciences, Educational Leadership and Policy Studies, Communication, Earth, Ocean, and Atmospheric Science, Chemistry and Biochemistry, Biological Science, Political Science, Economics, and Recreation, Tourism and Events.

Research

Figure 9: Number of Sustainability Researchers that Address SDG 3 by College

The College of Arts and Sciences was the highest performing college for this goal with 12 sustainability researchers addressing SDG 3 across all departments. The College of Social Sciences and Public Policy had 11 researchers, the College of Medicine had eight researchers, and the College of Nursing had six researchers.





Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Sabrina Dickey is an Associate Professor in the College of Nursing. Her focus is on the health disparity of prostate cancer among black men and health and illness communication within Black families. You can read more about Dr. Dickey and her recent publication, *Environmental and Racial Justices Issues in Black Communities 2.5 Years After Major Disasters*, here.

Dr. Chris Uejio is an Associate Professor of Public Health in the College of Social Sciences and Public Policy. He studies how the physical environment, broadly defined, influences human health and well-being. He frequently works with health departments to understand and adapt to climate change. You can read more about Dr. Uejio and his research <u>here</u>.



Teaching

Figure 10: Number of Sustainability Courses that Address SDG 3 by College

The College of Social Sciences and Public Policy had 24 sustainability courses that were found to address SDG 3. The College of Medicine had nine courses, the College of Arts and Sciences had seven, the College of Communication had five, the College of Nursing had three, the FAMU-FSU College of Engineering had two, and the Colleges of Communication and Information and Hospitality each had one.



Number of Sustainability Courses that Address SDG 3 by College

Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Ecology of Infectious Disease (PCB 4402), an undergraduate level course in the Biological Science department of the College of Arts and Sciences, addresses SDG 3 by exploring how concepts and tools of basic ecology can and have been used to understand the dynamics of infectious disease and contribute to our ability to predict, prevent, and control disease outbreaks. Students consider diseases of humans and their domesticated plants and animals, as well as the role of disease in natural systems. Students are also expected to read extensively in the primary literature and to contribute to regular class activities and discussions as well as research and present information on specialized topics such as the role of conservation corridors in the spread of disease, possible responses to pandemics and bioterrorism, and identification of sources of emerging diseases.

Campus Programs

The Center for Health Advocacy & Wellness (CHAW) at University Health Services encourages students to make healthy lifestyle decisions that facilitate academic success and lead to life-long health and wellness. The Center for Health Advocacy and Wellness provides quality, research-based wellness services and Health Promotion programs available to all FSU students (CHAW, n.d.).

Counseling & Psychological Services provides assistance with concerns such as homesickness, struggles with relationships, sexual identity and gender questions, cultural issues, eating and body image, substance use, worries, and depression (Counseling & Psychological Services at Florida State University, n.d.).

Campus Recreation is FSU's leader in creating healthy lifestyles through fitness, wellness, sports, outdoor adventures, and aquatics. Campus Recreation benefits include unlimited access to the Leach Student Recreation Center, the Fitness & Movement Clinic, the FSU Reservation Waterfront Park, and most group fitness classes (FSU Campus Recreation, n.d.).


Summary

SDG 4: Quality Education aims to ensure that all children complete free, equitable and quality pre-primary, primary, and secondary education. This includes technical and vocational skills. The UN aims to eliminate gender disparities in education and ensure that all youth achieve literacy by 2030. These goals should be achieved by building and upgrading education facilities, substantially expanding the number of scholarships available, and increasing the supply of qualified teachers.

Sustainable Campus identified 27 sustainability researchers and 27 sustainability courses relevant to SDG 4 throughout the university.

FSU research relevant to SDG 4 includes topics such as qualitative research methods and institutional policies in higher education, academic accommodations, school climate and leadership, science identity for underrepresented minorities in STEM, and nonformal learning.

FSU departments and centers that were found to address SDG 4 in sustainability research and courses include:

- Dance
- Family Medicine and Rural Health
- Interior Architecture and Design
- Sociology
- Chemical & Biomedical Engineering
- Educational Leadership and Policy Studies
- School Psychology
- Art Education
- NHMFL

- Center for Postsecondary
 Success
- Educational Psychology and Learning Systems
- Learning Systems Institute
- Social Work
- Psychology
- Electrical & Computer Engineering
- Urban and Regional Planning
- Center for Economic Forecasting and Analysis

Figure 11: Number of Sustainability Researchers that Address SDG 4 by College

The College of Education was found to have 14 sustainability researchers whose work was relevant to SDG 4. The College of Fine Arts had six researchers, the Colleges of Medicine and Engineering each had two researchers, and the Colleges of Arts and Sciences, Social Work, and Social Sciences and Public Policy each had one researcher.



Number of Sustainability Researchers that Address SDG 4 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Lara Perez-Felkner is an Associate Professor of Higher Education and Sociology in the College of Education. She investigates racial-ethnic, gender, and socioeconomic disparities in post-secondary educational attainment and entry to scientific career fields. You can read more about Dr. Perez-Felkner and her research here.

Dr. Ayesha Khurshid is an Associate Professor of International and Multicultural Education in the College of Education. She investigates international education and gendered citizenship; women's education; international educational reforms and local cultural practices; and multicultural education in international contexts. You can read more about Dr. Khurshid and her research <u>here</u>.



Figure 12: Number of Sustainability Courses that Address SDG 4 by College

The College of Communication and Information had nine sustainability courses that address SDG 4 while the College of Education had eight courses. The College of Social Sciences and Public Policy had four courses, the Colleges of Business and Criminology had two courses, and the Colleges of Entrepreneurship and Hospitality each had one course.



Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Foundations of Education (EDF 5743) is a graduate level course in the College of Education that provides an overview of the social, cultural, philosophical, political, historical, and economic foundations of education. It examines the relationship between schools and the society in which they exist. Students examine the influences of culture, history, and economy on educational beliefs, policies, and practices.

Introduction to International Development (EDF 2082) is an undergraduate level course in the College of Education that constitutes a basic overview of international development work in the education sector in societies of Asia, Africa, the Middle East and Latin America. The course explores different approaches to international development and how these shape and influence educational improvement initiatives in countries of the Global South.

The Academic Center for Excellence (ACE) is a university learning center, focused on helping students develop the study skills and success habits that are necessary in a large research university and valued by future employers. ACE aims to teach, advise, tutor, and provide an academic environment that inspires students to excel and to use all the resources available to them (Academic Center for Excellence, n.d.).

The Center for the Advancement of Teaching seeks to recognize and cultivate learner-centered teaching throughout the university by providing support to faculty as they balance cutting-edge research with thoughtful teaching. The Center provides a space for collegial exchange about teaching and learning, bringing together faculty at all levels and across disciplines, to hone their expertise in facilitating learning and to promote the collective project of providing FSU students with a preeminent education (Center for the Advancement of Teaching, n.d.).

The Program for Instructional Excellence (PIE), a unit of The Graduate School, strives to enrich the learning experience for undergraduate students at FSU by supporting the teaching efforts of graduate student teaching assistants through its various services. PIE offers professional development programs that create opportunities to foster a sense of collaboration and community among all graduate student teaching assistants and any graduate student interested in learning best practices in teaching and learning while at FSU (PIE, n.d.).





Summary

The goal of SDG 5: Gender Equality is to achieve gender equality and empower all women and girls. The targets to achieve this goal include:

- Ending all forms of discrimination against women and girls;
- Eliminating all forms of violence and harmful practices against women and girls;
- Recognizing and valuing unpaid care and domestic work;
- Ensuring women's full and effective participation and equal opportunities for leadership; and
- Ensuring universal access to sexual and reproductive health and reproductive rights.

Undertaking reforms to give women equal economic rights, enhancing the use of communication and information technology, and adopting and strengthening policies that promote the empowerment of women and girls are also ways in which SDG 5 can and should be achieved.

Sustainable Campus identified 18 sustainability researchers and 39 sustainability courses relevant to SDG 5 throughout the university.

Faculty members address SDG 5 by researching educational policymaking, planning in developing areas, health disparities and mental health equity, aging and incarceration, the child welfare system, black infant mortality, and economic sociology, among other topics.

Students can learn more about SDG 5 through courses that address gender and identity, the role of women in disasters, domestic workers, sports ethics, women-owned businesses, reproductive health issues, crime, and political culture, among other topics.

Figure 13: Number of Sustainability Researchers that Address SDG 5 by College

The Colleges of Education and Medicine each had four sustainability researchers that were found to address SDG 5. The Colleges of Fine Arts and Social Sciences and Public Policy each had three researchers, the Colleges of Social Work and Arts and Sciences each had two researchers, and the College of Nursing had one researcher.





Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Paromita Sanyal is a Professor of Sociology in the College of Social Sciences and Public Policy. Her research focuses on understanding development, anti-poverty, and women's empowerment interventions from a sociological perspective. Dr. Sanyal has strong interests in gender and development and economic sociology. You can read more about Dr. Sanyal <u>here</u>.

Dr. Melissa Radey is a Professor in the College of Social Work and is a faculty affiliate for the Florida Institute for Child Welfare. Her research focuses on families and understanding barriers to economic, social, and physical well-being. You can read more about Dr. Homan and her recent publication, *Informal Networks of Low-Income Mothers: Support, burden and change, here.*



Figure 14: Number of Sustainability Courses that Address SDG 5 by College

15 sustainability courses in the College of Social Sciences and Public Policy were found to be relevant to SDG 5. In addition, there were 11 courses in the College of Education, four courses in the College of Communication and Information, two courses in the College of Arts and Sciences, two courses in both the College of Business and the College of Criminology, and one course each in the College of Hospitality and the Jim Moran College of Entrepreneurship.



Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Sexual Health and The Modern World (IDS 2332r) is a undergraduate interdisciplinary Sociology course in the College of Social Sciences and Public Policy that analyzes and synthesizes information centering on a number of current sexual and reproductive health issues. Course materials include the interdisciplinary theorizing of feminists, medical social scientists, anthropologists, demographers, and public health scholars.

Domestic, Factory, and Sex Work: Feminist Perspectives on Globalization (IDH 2403) is an undergraduate level course in the College of Social Sciences and Public Policy. By focusing on the roles that domestic workers, factory workers, and sex workers play within the global economy, this course engages feminist debates about the ethics of globalization, the challenges of transnational activism, and the potential complicities of U.S. citizens in maintaining global structures of inequality.

The Women in Entrepreneurship (WIE) Initiative is a Jim Moran College program that aims to inspire, instill and ignite women entrepreneurs throughout the FSU community and beyond. WIE aims to offer collaborative programming, networking, support and promotion of FSU students, alumnae, faculty, and community partners pursuing entrepreneurial endeavors (FSU Women in Entrepreneurship, n.d.).

The Women in Math, Science & Engineering Program is a living-learning community housed in Cawthon Hall at FSU. WIMSE is committed to the success of women in the fields of science, engineering and mathematics (WIMSE, n.d.).





Summary

The goal of SDG 6: Clean Water and Sanitation is to achieve universal and equitable access to safe and affordable drinking water for all. By 2030, the UN aims to:

- Increase water-use efficiency;
- Improve water quality;
- Implement integrated water resources management at all levels; and
- Protect and restore water-related ecosystems.

Ending open defecation, expanding international cooperation and capacity-building support to developing countries in water- and sanitation-related activities, and strengthening the participation of local communities in improving water and sanitation management are other ways the UN hopes to advance SDG 6 across the globe.

Sustainable Campus identified 15 sustainability researchers and 26 sustainability courses relevant to SDG 6 throughout the university.

Faculty members address SDG 6 by researching groundwater reactive transport modeling, hydraulic modeling, subsurface water flow, private water allocation, water cycles, and drinking and wastewater treatment, among many other topics.

Students can learn more about SDG 6 through the lens of hospitality, educational policy, political science, nursing, African-American studies, economics, geography, international affairs, public administration, sociology, and/or social work in FSU courses.

Figure 15: Number of Sustainability Researchers that Address SDG 6 by College

Seven sustainability researchers in the College of Engineering were found to be relevant to SDG 6. The College of Arts and Sciences had five researchers, the College of Social Sciences and Public Policy had two researchers, and the College of Law had one researcher.



Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Erin Ryan is the Elizabeth C. and Clyde W. Atkinson Professor, Associate Dean for Environmental Programs, and Director of the FSU Center for Environmental, Energy, and Land Use Law at the College of Law. Dr. Ryan specializes in environmental and natural resources law and water law. You can read more about Dr. Ryan and her recent publication, *The Public Trust Doctrine, Private Rights in Water, and the Mono Lake Story, here.*

Dr. Nasrin Alamdari is an Assistant Professor of Civil and Environmental Engineering in the FAMU-FSU College of Engineering. Her research focuses on urban hydrology, sustainable and resilient urban water systems, stormwater management, and the impact of nonstationary stressors such as climate and land use change on hydrology. You can read more about Dr. Alamdari <u>here</u>.



Figure 16: Number of Sustainability Courses that Address SDG 6 by College

SDG 6 was found to be relevant to sixteen sustainability courses in the FAMU-FSU College of Engineering. Both the Colleges of Law and Social Sciences and Public Policy had three courses; the College of Arts and Sciences had two courses; and the Colleges of Education and Entrepreneurship each had one course.



Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Water Reuse Engineering (ENV 5407) is a graduate level course in the department of Civil and Environmental Engineering in the FAMU-FSU College of Engineering. The course covers wastewater reclamation and reuse; treatment processors and systems; monitoring and control instrumentation; health and social aspects; and the design of facilities/systems.

Water Resources (GEO 4280) is an undergraduate level course in the Geography department of the College of Social Sciences and Public Policy. This course provides students with a comprehensive overview of the natural processes associated with water occurrence and resources. Focus is given to water's unique properties, how it occurs and moves through the Earth's environment, how it impacts human habitation, and its future as a critical and valuable natural resource. Development of socio-economic concepts of management, supply, use, reclamation, and sustainability are also emphasized.

The Maji Project at FSU raises awareness of the global water crisis and the importance of clean water. In 2021, the organization fundraised for 120 Sawyer POINTOne water filters for communities in need (Sawyer, 2021).

7 AFFORDABLE AND CLEAN ENERGY



Summary

SDG 7: Affordable and Clean Energy aims to ensure universal access to affordable, reliable, and modern energy services by 2030. It also aims to:

- Substantially increase the share of renewable energy in the global energy mix;
- Double the global rate of improvement in energy efficiency;
- Enhance international cooperation to facilitate access to clean energy research and technology; and
- Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries.

Sustainable Campus identified 42 sustainability researchers and 28 sustainability courses relevant to SDG 7 throughout the university.

Faculty members address SDG 7 by researching energy policy, energy storage devices, intermetallic magnets for electric vehicles, power systems, heat transfer, energy efficiency, fuel cells, and renewable energy methods, among other topics.

Courses address SDG 7 through the lens of mechanical engineering, geography, law, economics, electrical and computer engineering, history, entrepreneurship, educational leadership and policy studies, and/or Earth, ocean, and atmospheric sciences.

Figure 17: Number of Sustainability Researchers that Address SDG 7 by College

Twenty two sustainability researchers in the FAMU-FSU College of Engineering were found to address SDG 7. The College of Arts and Sciences had sixteen researchers while the College of Social Sciences and Public Policy had two researchers. The Colleges of Fine Arts and Communication and Information each had one researcher.





Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Tian Tang is an Assistant Professor in the Askew School of Public Administration and Policy. Her research is at the intersection of environmental and energy policy, technology policy, and policy implementation through cross-sectoral collaboration in the context of global climate change and sustainability. You can read more about Dr. Tang and her research here.

Dr. Omar Faruque is an Associate Professor in the Electrical and Computer Engineering department of the FAMU-FSU College of Engineering. His research focuses on power systems components and their controllers. He uses real-time simulation techniques for studying system interactions in the areas of electric ship technology, smart grid, renewable energy, and in other emerging areas in power engineering. You can read more about Dr. Faruque <u>here</u>.



Figure 18: Number of Sustainability Courses that Address SDG 7 by College

Thirteen FAMU-FSU College of Engineering sustainability courses were found to be applicable to SDG 7. In addition, seven courses from the College of Arts and Sciences, three courses from the College of Social Sciences and Public Policy, two courses from the Colleges of Law and Entrepreneurship, and one course from the College of Education were identified as relevant.



Number of Sustainability Courses that Address SDG 7 by College

Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Energy Conversion Systems for Sustainability (EML 5451) in the department of Mechanical Engineering (FAMU-FSU College of Engineering) is a graduate level course that discusses the challenges of making the global energy system independent of finite fossil-energy sources. The course emphasizes strategies for producing energy that is free of greenhouse gas emissions, including renewable energy sources such as solar, wind, and biomass.

Energy (GLY 3039) is an undergraduate level course in the Earth, Ocean and Atmospheric Science department (College of Arts and Sciences) that examines the origin of our energy and mineral resources (e.g., fossil fuels, uranium, hydrogen), their global supply, and the environmental impacts of extracting and utilizing these resources. Emphasis is placed on the chemical nature of the resources and the impact on the chemical composition of the ocean/atmosphere and the global heat budget.

The Center for Advanced Power Systems (CAPS) is a multidisciplinary research center organized to perform basic and applied research to advance the field of power systems technology. CAPS' emphasis is on application to electric utility, defense, and transportation, as well as developing an education program to train the next generation of power systems engineers (CAPS, n.d.).

The Sustainable Energy Science and Engineering Center addresses challenging alternative energy issues through innovative solutions for consumers and industry. The Center's Off-Grid Zero Emissions Building Project (OGZEB) involves the design, construction and operation of an 800 sq. ft. completely solar-powered building. It is a prototype for developing and implementing cutting edge, alternative energy technologies in both residential and commercial settings (Energy & Sustainability Center, 2006).

The Sustainability and Governance Lab is an interdisciplinary research hub that investigates the planning, adoption, implementation, and effectiveness of policies and programs that promote sustainable development. In the Clean Energy Innovation and Policy area, researchers study 1) clean energy technology innovation and diffusion and 2) impacts and implementation of energy policies and sustainability programs (Sustainability and Governance Lab, n.d.-a).





Summary

The goal of SDG 8: Decent Work and Economic Growth is to promote inclusive and sustainable economic growth, full and productive employment, and decent work for all. UN initiatives that support this goal include the implementation of policies to promote sustainable tourism and the protection of labor rights. Increasing support for developing countries and creating policies that support decent job creation, entrepreneurship, and innovation are also targets to be achieved by 2030.

Sustainable Campus identified 36 sustainability researchers and 89 sustainability courses relevant to SDG 8 throughout the university.

Faculty members address SDG 8 by researching employment barriers, microfinance, women's entrepreneurship, rehabilitation counseling, employment transitions, social assimilation, polarized demands, housing economics, morality, urban resilience, and clean energy, among other topics.

Courses address SDG 8 through the lens of:

- Educational Leadership and Policy Studies
- Modern Languages and Linguistics
- Electrical and Computer Engineering
- Management
- Communication
- Criminology and Criminal Justice
- Social Science
- Hospitality
- Anthropology

- Classics
- Political Science
- Criminology and Criminal Justice
- Civil and Environmental Engineering
- Entrepreneurship
- Law
- Economics
- Geography
- International Affairs
- Urban and Regional Planning

Figure 19: Number of Sustainability Researchers that Address SDG 8 by College

The College of Social Sciences and Public Policy had ten sustainability researchers that addressed SDG 8 in their publications and projects. The College of Business had five researchers, while the College of Arts and Sciences had four researchers. The Colleges of Communication and Information, Education, and Engineering each had three researchers.



Number of Sustainability Researchers that Address SDG 8 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Julie Harrington is the Director of the FSU Center for Economic Forecasting and Analysis (CEFA). Her current research interests focus on the economics of the environment, education, energy, development, and affordable housing, among others. You can learn more about Dr. Harrington and her research <u>here</u>.

Dr. Sean McGinley is an Assistant Professor in the Dedman College of Hospitality. He has an interest in researching careers and how people develop professionally. You can learn more about Dr. McGinley and his recent publication, *Hotels' Environmental Leadership and Employees' Organizational Citizenship Behavior*, <u>here</u>.



Figure 20: Number of Sustainability Courses that Address SDG 8 by College

Thirty five sustainability courses in the College of Social Sciences and Public Policy were found to be relevant to SDG 8. The Jim Moran College of Entrepreneurship had twenty courses, while the College of Arts and Sciences had six courses, and the FAMU-FSU College of Engineering had eight courses.



Number of Sustainability Courses that Address SDG 8 by College

Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Business & Society (MAN 4701) is an undergraduate course in the Management program of the College of Business. The course is an examination of current and future issues in business and society with an emphasis on the social responsibility of businesses and future challenges for businesses in a pluralistic society.

Sustainable Value Chains in a Net Zero Carbon World (ENT 5XXX) is a graduate level course in the Jim Moran College of Entrepreneurship. This course focuses on sustainability of supply chains through the lens of these climate change drivers. These challenges transcend industry sectors. The course focuses on the food and agriculture industry as a microcosm for the decarbonization of supply chains. Students learn Life Cycle Analyses through their subset Carbon Footprint of Products and study the importance of value transfer through incentives and draw out critiques of treaty-based carbon markets in achieving Net-Zero by 2050.

The FSU Center for Economic Forecasting and Analysis (CEFA) specializes in conducting economic research and performing economic analyses to examine public policy issues across a spectrum of research areas. CEFA provides advanced research and training in energy, aerospace, environmental economics, and economic development, among other areas (CEFA, n.d.).

The Sustainability and Governance Lab is an interdisciplinary research hub that investigates the planning, adoption, implementation, and effectiveness of policies and programs that promote sustainable development. In the Economic Development area, researchers study 1) driving forces of urban innovation and entrepreneurship and 2) local economic development strategies and their impacts on economic outcomes, social equity and sustainability (Sustainability and Governance Lab, n.d.-b).

9 INDUSTRIES, INNOVATION AND INFRASTRUCTURE



Summary

SDG 9: Industries, Innovation and Infrastructure aims to build resilient infrastructure, promote sustainable industrialization, and foster innovation. The targets for this goal include:

- Developing high-quality, reliable, sustainable, and resilient infrastructure; and
- Promoting inclusive and sustainable industrialization.

Other UN initiatives that relate to this goal involve upgrading infrastructure and retrofitting industries to make them more sustainable, enhancing scientific research, upgrading the technological capabilities of industrial sectors in all countries, and substantially increasing the number of research and development workers per one million people.

Countries around the world are encouraged to facilitate sustainable and resilient infrastructure through enhanced financial and technical support, the promotion of research and innovation in developing countries, and increased access to information and communications technology.

Sustainable Campus identified 32 sustainability researchers and 43 sustainability courses relevant to SDG 9 throughout the university.

Faculty members address SDG 9 by researching topics such as transportation systems resilience, smart materials, unmanned aerial system datasets, experimental robotics, and technology adoption in middle-aged and older adults.

Students can learn more about SDG 9 through courses that address mass media, transportation planning, Geographic Information Systems, sustainable development in Latin America, public decision making, and capital intensive infrastructure systems, among other topics.

Figure 21: Number of Sustainability Researchers that Address SDG 9 by College

Twenty two sustainability researchers associated with the FAMU-FSU College of Engineering were found to address SDG 9 in their work. The College of Social Sciences and Public Policy had five researchers, the College of Arts and Sciences had four researchers, and the College of Business had one researcher.





Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Eren Ozguven is an Associate Professor of Civil and Environmental Engineering at the FAMU-FSU College of Engineering and Director of the RIDER Center. His research focus is on the relationships among different infrastructure networks in Florida and how that contributes to an area's ability to be prepared for disasters, such as hurricanes. You can learn more about Dr. Ozguven <u>here</u>.

Dr. Daniel Hallinan is an Associate Professor of Chemical and Biomedical Engineering at the FAMU-FSU College of Engineering. His research team studies polymers for advanced energy sustainability. Other areas of sustainability that motivate his research include membrane-based water desalination and carbon dioxide capture. You can learn more about Dr. Hallinan here.



Figure 22: Number of Sustainability Courses that Address SDG 9 by College

The two highest performing colleges in terms of SDG 9 are the College of Social Sciences and Public Policy, with twenty sustainability courses related to industry. innovation and infrastructure, followed by the FAMU-FSU College of Engineering with twelve courses.



Number of Sustainability Courses that Address SDG 9 by College

Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

New Media and Social Change (SYO4461) is an undergraduate course in the Sociology department of the College of Social Sciences and Public Policy. The course aims to survey some of the research outlining the influence of mass media on individuals, institutions, and culture. The course pays attention to both "old" media (e.g., television and newspapers) and "new" media (e.g., websites, and social media) and broadly explores how technological changes effect social institutions and society.

Planning for Community Infrastructure (URP5371) is a graduate level course in the Urban and Regional Planning department of the College of Social Sciences and Public Policy. This course examines issues and techniques in planning for community infrastructure. Emphasis is placed on capital intensive infrastructure systems, but other services and facilities are also covered. Considerable attention is devoted to analyzing variations in demand for infrastructure associated with land use types, intensities, and spatial form.

The Resilient Infrastructure & Disaster Response Center (RIDER) promotes allinclusive and equitable disaster resilience for vulnerable populations. RIDER leverages technology, data, and multidisciplinary research with a deep understanding of how the unique conditions of each community's physical and social dynamics, available infrastructure, and land use affect resilience (RIDER, n.d.).



Summary

The goal of SDG 10: Reduced Inequalities is to reduce inequality within and among countries. The main target for this goal is to empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

To meet this goal, the UN encourages countries to ensure equal opportunity and enhanced representation, reduce inequalities of outcome, and facilitate the orderly, safe, regular and responsible migration and mobility of people.

Other sub-targets of SDG 10 include implementing the principle of special and differential treatment for developing countries; encouraging official development assistance and financial flows; and reducing the transaction costs of migrant remittances.

Sustainable Campus identified 68 sustainability researchers and 65 sustainability courses relevant to SDG 10 throughout the university.

Faculty members address SDG 10 by developing partnerships with low-resource communities of color and researching topics such as inclusive spaces, interracial relationships, human migration, stuctural racism, culturally relevant education, and the social vulnerability index, among other topics.

Courses address SDG 10 through the lens of multicultural urbanism, international disaster management, international social work, African-American culture, social welfare, nursing and vulnerable populations, and cultural representation, among other topics.

Figure 23: Number of Sustainability Researchers that Address SDG 10 by College

The College of Social Sciences and Public Policy was found to have the most sustainability researchers that addressed SDG 10, with nineteen in total. The College of Education had thirteen researchers, and the Colleges of Arts and Sciences and Medicine had seven researchers.



Number of Sustainability Researchers that Address SDG 10 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Sandy Wong is an Assistant Professor of Public Health in the College of Social Sciences and Public Policy. She studies how our social, built, and natural environments influence the well-being of marginalized communities. Her current research interests include green space access for people with disabilities and inequalities in healthcare access. You can learn more about Dr. Wong here.

Dr. Petra Doan is a Professor and PhD Program Director of Urban and Regional Planning in the College of Social Sciences and Public Policy. She is interested in planning for marginal communities in less developed areas. Dr. Doan is also involved in research on planning for non-normative populations and the development and demise of queer space (LGBT neighborhoods). You can learn more about Dr. Doan here.



Figure 24: Number of Sustainability Courses that Address SDG 10 by College

The College of Social Sciences and Public Policy was found to offer thirty four sustainability courses relevant to SDG 10. The Colleges of Social Work and Education offer eight courses, while the College of Communication and Information offers four.





Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Culture and Society (SYD 3374) is an undergraduate course in the Sociology department of the College of Social Sciences and Public Policy. Students are introduced to sociological, feminist, critical race, and queer theoretical perspectives on "taste," power, and cultural representation, emphasizing how culture shapes our experiences and understandings of socially constructed phenomena such as class, race, sexuality, and gender.

Diversity and Social Justice (SOW 4620) is an undergraduate course in the College of Social Work. This course enhances student understanding of human diversity and prepares students to engage in a lifetime pursuit of cultural competence. Students are encouraged to reflect upon and discuss the intricacies of their own particular dominant and/or minority social statuses and their relations to other individuals and communities. The course is designed to train students to apply theoretical frameworks to the forms and mechanisms associated with diversity, differences, and oppression.

Campus Programs

The Center for Academic Retention and Enhancement (CARE) was created at Florida State University in 1968. CARE operates to provide equity and access to students with identities traditionally underrepresented in higher education. CARE serves as a partner for these students in navigating barriers that exist for them based on educational and socioeconomic circumstances (CARE, n.d.).

The President's Council on Equity, Diversity, and Inclusion is a body comprised of FSU faculty, staff, students, and alumni that work to ensure that FSU creates and maintains a diverse, inclusive, and equitable campus for all members of the Florida State community (Diversity & Inclusion, n.d.).

The Social Justice Living-Learning Community (SJLLC) is designed for students of all majors who desire to engage in meaningful, intentional, and open discussion on many societal issues. SJLLC, colloquially known as SoJust, is made up of up to 30 students who participate in this supportive, inclusive community. "SoJusters" challenge existing beliefs and opinions by participating in discussions with diverse groups of students (The Center for Leadership & Social Change, n.d.).

SUSTAINABLE CITIES AND COMMUNITIES



Summary

SDG 11: Sustainable Cities and Communities aims to make cities inclusive, safe, resilient, and sustainable. The targets for this goal include:

- Reducing the adverse environmental impact of cities and the negative effects caused by disasters;
- Protecting the world's cultural and natural heritage; and
- Enhancing inclusive and sustainable urbanization.

To meet this goal, the UN encourages countries to provide access to affordable housing, basic services, green spaces, and transport systems. This initiative also requires countries to examine the relationships between their urban and rural areas and implement policy changes towards these targets.

Sustainable Campus identified 72 sustainability researchers and 148 sustainability courses relevant to SDG 11 throughout the university.

Faculty members address SDG 11 by researching development in the Amazon, homelessness, transit oriented development, neighborhood crime rates, the housing market, community capacity building, urban and rural community relationships, and planning for inclusive spaces, among other topics.

Students can learn to better address SDG 11 through topics such as coastal environmental planning, Geographic Information Systems, transportation, demographic change, modern disaster response operations, community-based programs, and sustainable design, among many other topics.

Figure 25: Number of Sustainability Researchers that Address SDG 11 by College

The College of Social Sciences and Public Policy was found to have twenty sustainability researchers that addressed SDG 11 in their publications and projects. The College of Arts and Sciences had fourteen researchers; the College of Fine Arts had ten researchers; and the Colleges of Business and Engineering had seven researchers.



Number of Sustainability Researchers that Address SDG 11 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Horacio Rousseau is an Assistant Professor of Strategy and Entrepreneurship in the Department of Management at FSU's College of Business. His main research focuses on sustainable development. You can learn more about Dr. Rousseau and his recent publication, *Localizing Sustainable Development Goals: Nonprofit Density and City Sustainability*, <u>here</u>.

Meghan Mick is an Assistant Professor of Interior Architecture and Design in the College of Fine Arts. Her research interests include the role of environmental graphics in place making and biophilic design to further connect indoor and outdoor environments for the health and well-being of people and the natural world. Read more about Professor Mick <u>here</u>.



Figure 26: Number of Sustainability Courses that Address SDG 11 by College

The College of Social Sciences and Public Policy had a total of 105 sustainability courses that were relevant to SDG 11. The Colleges of Criminology and Education each had ten courses, while the College of Engineering had nine courses, and the College of Arts and Sciences had seven courses.





Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Sustainable Society (IDS 2227) is an undergraduate course in the Geography department of the College of Social Sciences and Public Policy. The course provides students with the opportunity to observe and inquire about sustainable practices. Students engage in critical thinking about the sustainability of human society and the environment from various aspects, which include producers, consumers, public-service sectors, and policy makers.

Introduction to Transportation Planning (URP 5355) is a graduate level course in the Urban and Regional Planning department of the College of Social Sciences and Public Policy. It provides an overview of the broad area of international transportation planning. The course features analyses of a number of specific case studies of transportation planning from around the world, including from Europe, Canada, China, India, Russia, Africa and the developing world. It includes analytical exercises that are relevant to growing international transportation planning challenges.

The Mark & Marianne Barnebey Planning & Development Lab is a nationallyrecognized resource which utilizes Florida as a laboratory and draws upon the academic and professional resources of Florida State University to connect with public and private partners to provide capacity and innovative planning for the sustainable growth and long-term viability of Florida communities (Barneby Planning & Development Lab, n.d.).

The Florida Resources and Environmental Analysis Center (FREAC) is an applied research center of Florida State University. FREAC specializes in facilitating the understanding and implementation of spatial information within communities and local governments. FREAC houses the Florida Natural Areas Inventory and is a leader in conservation planning, mapping, inventory and analysis (FREAC, n.d.).

reCycle Bike is a bicycle rental program offering affordable transportation and educational events for students. The complete rental package includes a refurbished bicycle, lock, helmet, front and rear lights, basic repairs, safety classes, maintenance workshops, and social rides (Sustainable Campus, n.d.-c).

The Sustainability and Governance Lab is an interdisciplinary research hub that investigates the planning, adoption, implementation, and effectiveness of policies and programs that promote sustainable development. In the Land Use Policy area, researchers study 1) local adoption of various growth management programs and 2) effective growth management programs in curbing urban sprawl (Sustainability and Governance Lab, n.d.-c). In the Smart Cities and Digital Governance area, researchers study 1) smart city technology adoption and 2) how smart city technologies affect public service delivery (Sustainability and Governance Lab, n.d.-d).

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Summary

SDG 12: Responsible Consumption and Production aims to ensure sustainable consumption and production patterns across the globe. The targets to reach this goal include:

- Reducing waste generation; and
- Sustainably managing the use of natural and chemical resources.

This goal can and should be achieved by providing education on living in harmony with nature, strengthening scientific capacity in developing countries, and developing tools to monitor sustainable consumption and production. To meet these targets, the UN discourages countries from adopting inefficient fossil-fuel subsidies.

Sustainable Campus identified 37 sustainability researchers and 59 sustainability courses relevant to SDG 12 throughout the university.

Faculty members address SDG 12 by researching sustainable product development, solvent extraction, nuclear resources, environmental inequality, conservation, public good demand, and landfill leachate, among other topics.

Courses cover SDG 12 through topics such as air pollution, polymer chemistry, remediation engineering, environmental engineering, marine conservation, sustainable food and water practices, hydrology, population economics, microbiology, forager societies, and conservation biology.

Figure 27: Number of Sustainability Researchers that Address SDG 12 by College

The College of Arts and Sciences was found to have twenty sustainability researchers working on publications and projects related to SDG 12. The FAMU-FSU College of Engineering had six researchers, the College of Social Sciences and Public Policy had four researchers, and the Colleges of Engineering, Hospitality, and Business each had two researchers.



Number of Sustainability Researchers that Address SDG 12 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Tarek Abichou is a Professor of Civil and Environmental Engineering in the FAMU-FSU College of Engineering. He has investigated alternative ways to cover solid waste facilities for more than 25 years. Dr. Abichou is also known for his research examining the mitigation of greenhouse gas emissions from landfills. You can read more about Dr. Abichou <u>here</u>.

Dr. Justin Kennemur is an Associate Professor of Chemistry in the College of Arts and Sciences. He researches sustainable plastics composed of chiral biomass-based feedstock. His team also examines advanced elastomeric and super-soft materials with enhanced recyclability. Learn more about Dr. Kennemur <u>here</u>.



Figure 28: Number of Sustainability Courses that Address SDG 12 by College

The FAMU-FSU College of Engineering had the highest number of sustainability courses relevant to SDG 12 with a total of seventeen courses. The College of Social Sciences and Public Policy had sixteen courses, while the College of Arts and Sciences had seven courses, and the College of Communication and Information had six courses.



Number of Sustainability Courses that Address SDG 12 by College

Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Remediation Engineering (ENV 4022) is an undergraduate Civil and Environmental Engineering course (FAMU-FSU College of Engineering) that reviews various innovative remediation technologies used for cleanup of contaminated soil and groundwater at a site such as air sparging, soil vapor extraction, reactive walls, reactive zones, stabilization technologies, as well as hydraulic and pneumatic fracturing pump-and-treat systems.

Forager Societies (ANG 5111) is a graduate level course in the Anthropology department of the College of Arts and Sciences. This course focuses on human societies throughout the world that have lived by hunting and gathering wild resources. The course examines specific subsistence strategies of a wide range of hunter-gatherer groups, relative to their technology, social structure, territory, demography and interaction with food producers in both the archaeological record and through ethnography.

Garnet & Gold Goes Green (G4) is FSU's game day recycling program. Student volunteers act as a friendly face by giving fans the opportunity to recycle with the intention of keeping Doak Campbell Stadium beautiful and promoting eco-friendly behavior. Since 2005, G4 has collected over 200 tons of recyclable material (Sustainable Campus, n.d.-b).




Summary

The goal of SDG 13: Climate Action is to take urgent steps to combat climate change and its impacts. To this end, the UN encourages countries to strengthen their resilience and adaptive capacity to climate-related hazards as well as integrate climate change measures into national policies. Improving education, awareness, and human/institutional capacity related to climate change are also ways that countries can advance this goal.

Other initiatives related to SDG 13 include fully operationalizing the Green Climate Fund and developing capacity for effective climate change-related planning and management in the least developed countries and small island developing states. The UN is specifically focused on increasing the ability of women, youth, and marginalized communities to contribute to these efforts.

Sustainable Campus identified 96 sustainability researchers and 81 sustainability courses relevant to SDG 13 throughout the university.

Faculty members address SDG 13 by researching hurricane and disaster resilience, aquatic geochemistry, people-centered natural climate solutions, rare and endangered species, global climate modeling, rural and urban farming, sea turtle nests, the Gulf of Mexico, ice shelf collapse, and carbon biogeochemistry, among other topics.

Courses address SDG 13 through topics such as climate change and storms, marine conservation biology, eco-literature, environmental ethics, meteorology, environmental hazards, marine pollution, atmospheric chemistry, and environmental Geographic Information Systems, among other topics.

Research

Figure 29: Number of Sustainability Researchers that Address SDG 13 by College

The College of Arts and Sciences was found to have the highest number of sustainability researchers whose work addressed SDG 13, with 60 researchers in total. The College of Social Sciences and Public Policy had 18 researchers, while the College of Business had six researchers, the College of Communication and Information had five researchers, and the FAMU-FSU College of Engineering had two researchers.



Number of Sustainability Researchers that Address SDG 13 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Tisha Holmes is an Assistant Professor of Urban and Regional Planning in the College of Social Sciences and Public Policy. Dr. Holmes seeks sustainable pathways to reducing risk and building socio-ecological resilience to hazards. Dr. Holmes advances inclusive and socially just solutions to environmental problems faced by marginalized groups. Read more about Dr. Holmes <u>here</u>.

Dr. Shi-Ling Hsu is the D'Alemberte Professor at the College of Law. He is an expert in the areas of environmental and natural resource law, climate change, law and economics, and property. You can read more about Dr. Hsu and his recent book, *Capitalism and the Environment: A Proposal to Save the Planet, here.*



Figure 30: Number of Sustainability Courses that Address SDG 13 by College

The College of Arts and Sciences also had the highest number of sustainability courses relevant to SDG 13, with 39 courses across all departments. The College of Social Sciences and Public Policy had 21 courses, the College of Communication and Information had six courses, and the Colleges of Education and Hospitality had three courses.



Number of Sustainability Courses that Address SDG 13 by College

Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Sustainable Public Discourse (HUM 2937) is an undergraduate English course in the College of Arts and Sciences. Known alternatively as "ecospeak," "popular science," and "science-based CSR," the phenomenon of moving scientific facts into the public sphere is one that deserves our critical attention. Literally speaking, the course examines academic and real-world genres that advocate for sustainability. Figuratively speaking, the course consider specific paradigms in written communication that perpetuate, devolve, or recycle themselves over time.

Climate Change Science (MET 3103C) is an Earth, Ocean, and Atmospheric Science course in the College of Arts and Sciences. This course enables students to explore the science behind our understanding of climate change. The course provides an in-depth exploration of the use of proxy, in situ, remote-sensing data, climate models, and their public policy implications. Students gain experience in evaluating internal and external

forcings on the climate system and make quantitative assessments of change. **Campus Programs**

The Center for Ocean-Atmospheric Prediction Studies (COAPS) promotes interdisciplinary research in air-sea interaction, the coupled ocean-atmosphere-land-ice earth system, and climate prediction on scales of weeks to decades in order to increase our understanding of the physical, social, and economical consequences of coupled ocean-atmospheric variations (COAPS, n.d.).

The Florida Climate Institute (FCI) is a multi-disciplinary network of national and international research and public organizations, scientists, and individuals concerned with achieving a better understanding of climate variability and change (FCI, n.d.)





Summary

The goal of SDG 14: Life Below Water is to conserve and sustainably use the oceans, seas, and marine resources for sustainable development. To advance this goal, the UN encourages all countries to prevent marine pollution of all kinds, sustainably manage and protect marine and coastal ecosystems, and minimize and address the impacts of ocean acidification.

Other important targets of SDG 14 include the eradication of illegal, unreported, unregulated, and excessive fishing; the eradication of harmful fishing subsidies; and the creation of economic benefits for small island developing states that implement the sustainable use of marine resources. Countries can also advance SDG 14 by increasing scientific knowledge on marine resources in general and implementing international laws for the conservation and sustainable use of oceans around the globe.

Sustainable Campus identified 57 sustainability researchers and 65 sustainability courses relevant to SDG 14 throughout the university.

Faculty members address SDG 14 by researching Apalachicola Bay, meiofauna and nematodes, private water allocation, coral reef ecosystems, ocean-ice interactions, deep ocean extreme communities, and global ocean circulation, among other topics.

Courses address SDG 14 through topics such as aquatic chemistry, marine field methods, coastal ecology, hydrogeology, river basin planning, oceanic law, and marine pollution.

Research

Figure 31: Number of Sustainability Researchers that Address SDG 14 by College

The College of Arts and Sciences had the highest number of sustainability researchers who addressed SDG 14 in their publications and projects with 48 researchers. The FAMU-FSU College of Engineering had three researchers, while the Colleges of Fine Arts, Law, and Social Sciences and Public Policy each had two researchers.



Number of Sustainability Researchers that Address SDG 14 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Mariana Fuentes is an Associate Professor of Oceanography and Environmental Science in the College of Arts and Sciences. Her research addresses real-world issues related to the conservation and management of marine turtles and other marine megafauna. You can read more about Dr. Fuentes <u>here</u>.

Dr. Sarah Lester is an Associate Professor of Geography in the College of Social Sciences and Public Policy. Her research addresses questions related to coastal and marine natural resource management, marine conservation science, ecosystem sustainability, and marine biogeography. You can read more about Dr. Lester <u>here</u>.



Figure 32: Number of Sustainability Courses that Address SDG 14 by College

The College of Arts and Sciences had the highest number of sustainability courses applicable to SDG 14 with a total of 37 courses. The College of Social Sciences and Public Policy had 20 courses, while the College of Communication and Information had three courses, and the FAMU-FSU College of Engineering had two courses.



Number of Sustainability Courses that Address SDG 14 by College

Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Coastal Ecology (OCB 4631) is an undergraduate Earth, Ocean, and Atmospheric Science course in the College of Arts and Sciences. This interdisciplinary course addresses the ecology of estuaries. The lectures address the general ecological principles that govern the productivity and diversity of estuaries, including their hydrodynamics, sedimentology, chemistry, as well as plant and animal community structure.

Marine Pollution (EOC 4631) is an undergraduate Earth, Ocean, and Atmospheric Science course in the College of Arts and Sciences. This course introduces students to chemical, physical, and biological aspects of dominant marine pollutants, including dissolved toxic metals, complex organic and inorganic contaminants, and particulate pollutants. Topics cover the sources and types of dominant contaminants, their key characteristics, their pathways, their impact on the environment, as well as approaches that could lead to the reduction or elimination of pollutants in the marine environment.

Campus Programs

The Apalachicola Bay System Initiative (ABSI) seeks to gain insight into the root causes of decline of the bay's ecosystem and the deterioration of oyster reefs. Ultimately, the ABSI will develop a management and restoration plan for the oyster reefs and the health of the bay (ABSI, n.d.).

The Coastal and Marine Laboratory (Marine Lab) conducts innovative, pioneering, interdisciplinary research on coastal and marine ecosystems, mentors the next generation of problem solvers, and leverages scientific outcomes and expertise through engagement with stakeholders to optimize marine management and conservation (Marine Lab, n.d.).

The Gulf Scholars Program is rooted in the grand vision of building a more just, equitable, sustainable, and resilient Gulf of Mexico region. This vision stems from the larger mission to recover from the 2010 Deepwater Horizon Oil Spill and prepare for additional social, economic, environmental, and climate stressors occurring throughout the region (FAMU-FSU College of Engineering, n.d.).





Summary

The goal of SDG 15: Life on Land is to protect, restore, and promote the sustainable use of terrestrial ecosystems. The UN encourages countries to sustainably manage their natural resources and reverse land degradation and biodiversity loss. Specific targets for this goal include:

- Promoting the implementation of sustainable management of all types of forests;
- Combating desertification;
- Restoring degraded land, natural habitats, and soil; and
- Taking urgent action to stop the loss of biodiversity.

Additionally, countries can advance SDG 15 by equitably sharing the benefits of utilizing genetic resources, taking action to end poaching, and significantly reducing the impact of invasive alien species. These goals can also be reached by integrating ecosystem and biodiversity values into national and local planning and development processes.

Sustainable Campus identified 44 sustainability researchers and 73 sustainability courses relevant to SDG 15 throughout the university.

Faculty members address SDG 15 in their research by working on topics such as prescribed fires, farmland in metropolitan areas, dioecious threatened plants, the Mississippi River Delta, rare species, and bee phenology.

Students can learn more about working towards SDG 15 in courses that cover topics such as natural history, Earth systems and Earth science, landscape ecology, land use planning, environmental ethics, and conservation biology.

Research

Figure 33: Number of Sustainability Researchers that Address SDG 15 by College

The College of Arts and Sciences was found to have 30 sustainability researchers whose work was relevant to SDG 15. The College of Social Sciences and Public Policy had seven researchers, while the FAMU-FSU College of Engineering had three researchers and the Colleges of Social Work, Music, Fine Arts, and Business each had one researcher.



Number of Sustainability Researchers that Address SDG 15 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Stephanie Pau is an Associate Professor of Geography in the College of Social Sciences and Public Policy. Her research investigates the diversity and productivity of forests, savannas, and grasslands and how they are impacted by climate change. You can read more about Dr. Pau <u>here</u>.

Dr. Denise Von Glahn is a Professor of Musicology in the College of Music. She has written on music, nature, and place in her books *The Sounds of Place: Music and the American Cultural Landscape* and *Music and the Skillful Listener: American Women Compose the Natural World.* You can read more about Dr. Von Glahn and her work related to environmental awareness <u>here</u>.



Figure 34: Number of Sustainability Courses that Address SDG 15 by College

The College of Social Sciences and Public Policy was found to have the highest number of sustainability courses relevant to SDG 15 with 32 courses. The College of Arts and Sciences had 27 courses, while the FAMU-FSU College of Engineering had five courses, and the College of Communication and Information had three courses.



Number of Sustainability Courses that Address SDG 15 by College

Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Ecological Genetics (PCB 5615) is a graduate level Biological Science course in the College of Arts and Sciences. This course covers the fundamentals of modern ecological genetics. The course begins with an overview of genetic variation, its measurement, and the forces responsible for the origin and maintenance of variation within and among populations. The remainder of the course describes the ecological context of evolution, and the ecological and evolutionary forces that shape variation within and between populations. Emphasis is placed on experimental studies of natural populations, and the relationship between theory and experiments.

Landscape Ecology (GEO 5378) is a graduate level Geography course in the College of Social Sciences and Public Policy. This course offers a review of methods on analyzing geographic patterns of natural phenomena, including ecological conservation, natural resource management, landscape and urban planning, as well as humanenvironmental interaction and implications.

Campus Programs

The Department of Biological Sciences maintains greenhouses both on-campus and at an off-campus research facility. The greenhouse facilities support research in plant and animal ecology, population genetics, plant physiology, cell and molecular biology, and genetics. Some greenhouse space is reserved for a teaching collection, and for use in undergraduate biology courses (Department of Biological Science, n.d.).

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



Summary

The goal of SDG 16: Peace, Justice and Strong Institutions is to promote peaceful and inclusive societies for sustainable development. To achieve this goal, the UN encourages countries to provide access to justice for everyone and to build effective, accountable, and inclusive institutions at all levels. This goal can and should be achieved through the following actions:

- Significantly reducing all forms of violence;
- Ending abuse, exploitation, and trafficking;
- Promoting the rule of law; and
- Reducing the flow of illicit arms and corruption.

Countries can also advance SDG 16 by developing accountable and effective institutions; ensuring inclusive representation and global governance as well as access to information and fundamental freedoms; and providing a legal identity for all.

Sustainable Campus identified 19 sustainability researchers and 95 sustainability courses relevant to SDG 16 throughout the university.

Faculty member address SDG 16 through researching topics such as terrorism, sexual exploitation, human rights and global ethics, child advocacy, and racial justice and food justice.

Students can learn more about SDG 16 through courses that explore topics such as political processes, the sociology of law, historic preservation, state politics, legislative advocacy, and social welfare policy.

Research

Figure 35: Number of Sustainability Researchers that Address SDG 16 by College

The College of Arts and Sciences was found to have six sustainability researchers that addressed SDG 16 in their work. The Colleges of Social Work and Social Sciences and Public Policy each had five researchers, while the College of Fine Arts had two researchers and the College of Communication and Information had one researcher.



Number of Sustainability Researchers that Address SDG 16 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. John Mathias is an Assistant Professor in the College of Social Work. His research concerns the intersection between environmental issues and social justice. Dr. Mathias also studies community organizing, civic engagement, and social movements. You can learn more about Dr. Mathias and his forthcoming publication, *Green Social Work for Environmental Justice*, here.

Dr. Tyler McCreary is an Assistant Professor of Geography in the College of Social Sciences and Public Policy. His research examines how settler colonialism and racial capitalism inflect processes of environmental, labor, and community governance in North America. You can read more about Dr. McCreary and his recent publication, *Race, Land, and the Law*, <u>here</u>.



Figure 36: Number of Sustainability Courses that Address SDG 16 by College

The College of Social Sciences and Public Policy had the highest number of sustainability courses relevant to SDG 16 with 32 courses. The College of Arts and Sciences had 11 courses, while the College of Education had 12 courses.





Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

International Conflict and Terrorism (PAD 5839) is a graduate level course in the Public Administration and Policy department of the College of Social Sciences and Public Policy. This course introduces students to historical and ongoing conflicts around the world. Students explore how these conflicts have created terrorism and various tools to end both the conflict and the resulting terrorism. Students learn the drivers of conflict such as relative deprivation, dehumanization, and various politics.

Diversity and Social Justice (SOW 4620) is an undergraduate course in the College of Social Work. This course enhances student understanding of human diversity and prepares students to engage in a lifetime pursuit of cultural competence. Students are encouraged to reflect upon and discuss the intricacies of their own particular dominant and/or minority social statuses and their relations to other individuals and communities. The course is designed to train students to apply theoretical frameworks to the forms and mechanisms associated with diversity, differences, and oppression.

Campus Programs

The Center for Environmental, Energy, and Land Use Law aims to enhance the FSU College of Law's nationally ranked programs, which are taught by nationally recognized legal experts who produce impactful scholarship and provide a first-rate education to law students concentrating in areas of law relating to the environment; to engage in pioneering research and enrichment events that will help develop cutting-edge scholarship and policy; and to marshal legal skills for addressing challenges in the areas of environmental, land use, energy and natural resources law (College of Law, n.d.).





Summary

The goal of SDG 17: Partnerships for the Goals is to strengthen the means of implementation and revitalize the global partnership for sustainable development. Targets for this goal include:

- Strengthening domestic resource mobilization;
- Official assistance by developed countries for the least developed countries;
- Long term debt sustainability; and
- International cooperation.

Countries can also advance SDG 17 through the dissemination of environmentally sound technologies and capacity-building mechanisms. The UN also encourages countries to develop equitable, multilateral trading systems, duty-free market access, and enhanced policy coherence. Finally, SDG 17 involves mutual respect among countries, effective partnerships, and enhanced capacity building support.

Sustainable Campus identified 12 sustainability researchers and 56 sustainability courses relevant to SDG 17 throughout the university.

Faculty members address SDG 17 by researching topics such as intergovernmental

grants, collective action, religious ethics, public-private partnerships, and strategic management.

Students can take courses on topics such as wicked problems, public administration, non-governmental organizations, international development education, strategies for least developed countries, comprehensive planning and growth management, world cities, food systems, sustainable development, and global leadership to gain a stronger understanding of ways to achieve SDG 17.

Research

Figure 37: Number of Sustainability Researchers that Address SDG 17 by College

The College of Social Sciences and Public Policy had the highest number of sustainability researchers whose work was relevant to SDG 17 with eight researchers. The College of Arts and Sciences had two researchers, and the Colleges of Business and the FAMU-FSU College of Engineering each had one researcher.



Number of Sustainability Researchers that Address SDG 17 by College

Source: FSU Sustainability Research Inventory

Faculty Spotlight



Dr. Eric Coleman is an Associate Professor in the Political Science department of the College of Social Sciences and Public Policy. He studies how and why people act collectively to solve environmental problems. Dr. Coleman's research extends our knowledge of environmental governance by measuring and quantifying the effects that policy has on the sustainable use of resources. Read more about

Dr. Coleman here.

Dr. Kassie Ernst is a First-Year Engineering Faculty in the College of Engineering. Her research interests include climate change adaptation and science co-production. Dr. Ernst is the Director of the FSU Gulf Scholars Program, which provides students with an opportunity to work effectively on climate-related issues in the Gulf region across disciplines, cultures, and communities. Read more about Dr. Ernst <u>here</u>.



Figure 38: Number of Sustainability Courses that Address SDG 17 by College

The College of Social Sciences and Public Policy had 35 sustainability courses relevant to SDG 17. The College of Education had seven courses, the College of Social Work had five courses, the College of Entrepreneurship had four courses, and the College of Arts and Sciences had one course.





Source: FSU Sustainable Course Guide 2018-2020

Course Spotlight

Introduction to Development Planning (URP 5610) is a graduate level Urban and Regional Planning course in the College of Social Sciences and Public Policy. This course analyzes the problems of developing countries as integral parts of a more general process of the development of human societies on a global scale. The process of development is examined by a focus on the set of conditions leading to problems of development in most societies.

Collaborative Governance (URP 5123) is a graduate level Urban and Regional Planning course in the College of Social Sciences and Public Policy. This course prepares students to effectively build censuses and to resolve conflicts involving building permits, locally unwanted land uses, environmental regulations, community visions, projects, programs, allocation of public funds and services, intergovernmental battles, and controversial agency rules.

Campus Programs

Broader Impacts is a term used by the National Science Foundation, and other research funding agencies, to talk about how a researcher's work will impact more than just their scientific field. Broader impacts are usually related to promoting teaching, training, and learning, or broadening the participation of underrepresented groups. FSU faculty and staff can get involved with organizations at FSU and in the Tallahassee community (Office of Research Development, n.d.).

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