**BROADER IMPACTS**

**(UF Education & Outreach Resources Section below)**

The Broader Impacts (BI) criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes. This criterion is judged by the same principles and elements as Intellectual Merit, NSF’s other review criterion.

The new Proposal & Award Policies & Procedures Guide (PAPPG) adds requirements for assessment/evaluation of broader impacts activities, as well as bringing broader impacts to the forefront of the proposal and reporting process with new formatting requirements.

The “relevant merit review principles” below are excerpted from PAPPG 2019: <https://www.nsf.gov/pubs/policydocs/pappg19_1/index.jsp> .

**Relevant Merit Review Principles:**

* All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
* NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These broader impacts may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
* Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

The following elements should be considered in the review for Broader Impacts:

1. What is the potential for the proposed activity to: a) Advance knowledge and understanding within its own field or across different fields (Intellectual Merit) and b) benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

**In General:**

* Make the broader impacts activity relevant to the research program. You cannot completely outsource this. Broader impacts component must be integrated with the proposed research program and it should provide an extra edge to make the proposal competitive.
* In the same context, DO leverage existing programs on campus (some are described below), but DO NOT make the activities a plug-n-play kind.
* Quantify your activities: for example, with recruitment of underrepresented groups, give numbers for what has been accomplished at the college/university level, and what your goal is.
* The broader impact activities you propose need intellectual input from your research agenda.

**External resources:**

NSF presentation summarizing the changes: <http://www.nsf.gov/bfa/dias/policy/merit_review/overview.pdf>

Examples of successful broader impacts projects:

<https://www.nsf.gov/od/oia/special/broaderimpacts/>

Broader Impacts 2.0: Seeing—and Seizing—the Opportunity: <https://academic.oup.com/bioscience/article/63/3/153/228104>

The National Alliance for Broader Impacts (NABI):

<https://broaderimpacts.net/about/>

**UF RESOURCES**

**Teaching Resources**

**Natural Area Teaching Laboratory**

<http://natl.ifas.ufl.edu/>

The University of Florida Natural Area Teaching Laboratory (NATL) is dedicated to teaching students and the public about ecology and biotic diversity. At the same time NATL offers family friendly and [K-12 educational](http://natl.ifas.ufl.edu/Tabs/k12children.php) opportunities. It consists of 60 acres in two contiguous tracts in the southwest corner of campus. The larger tract, known as NATL-west, has 49 acres and is west of Natural Area/Surge Area Drive. The smaller tract, known as NATL-east, has 11 acres and is east of Natural Area/Surge Area Drive. NATL has significant samples of three upland ecosystems characteristic of north peninsular Florida: *hammock*, *upland pine*, and *old-field succession*. It has a variety of wetland habitats, including a 9-acre *marsh* in NATL-east that drains into a *pond and sinkhole* in NATL-west and a 3-acre *ecologically engineered retention basin* ([SEEP](http://natl.ifas.ufl.edu/seep.php)) in the northeast corner of NATL-west. For information on use of NATL in your teaching, see “Users and Uses” in the left sidebar at the above link.

**Center for Precollegiate Education and Training (CPET)**

<http://www.cpet.ufl.edu>

Dr. Mary Jo Koroly, Director, korolymj@ufl.edu

Dr. Julie Bokor, Associate Director, julie@cpet.ufl.edu

The Center for Precollegiate Education and Training (CPET) is uniquely poised as a University of Florida Center with expertise in research education, outreach, and evaluation. CPET has a 60-year history of partnering with the university community to provide content-rich, immersive STEM experiences and career explorations for K-14 teachers and students and to evaluate the outcomes and impacts of a diverse portfolio of programming.

CPET Programs are developed and coordinated to promote excellence in science, math, and technology; foster interdisciplinary science education throughout university research centers; forge partnerships among researchers, schools, communities, and industries; continually integrate research processes and product knowledge with national education goals and standards; foster the skills of research students, graduate students, and faculty to bring their work to the public.

In addition, CPET administers its own programs in collaboration with more than 400 research faculty annually. Thus, Principal Investigators can choose to partner with CPET and participate in existing, highly-prestigious programs for Florida teachers and secondary school students to broaden the impacts of their research in programs with recruitment, programmatic design, extracurricular support, and evaluation processes already in place. Targeted audiences include underrepresented populations.

**GeoGators Program, K-12 Education Outreach Program of the Department of Geological Sciences**

<https://people.clas.ufl.edu/azimmer/outreach/>

The GeoGators program organizes undergraduate geology majors and graduate students to deliver earth-science lessons and demonstrations to K-12 school science classes and other youth organizations around Gainesville, FL. Each year, the GeoGators delivers more than 50 geoscience lessons to schools, reaching over 1000 students. The basic lessons are: 1) Fossils, 2) Rocks and Minerals, 3) Rocks, Minerals and Fossils

**Program for K-9 Teachers**

<https://www.eng.ufl.edu/newengineer/news/uf-engineering-educator-trains-todays-teachers-to-improve-tomorrows-workforce/>

Dr. Nancy Ruzycki, Program PI, Director of Undergraduate Laboratories, Department of Materials Science & Engineering, nruzycki@mse.ufl.edu

Science, technology, engineering and mathematics (STEM) subjects are taught to Florida students as early as elementary school, but more teachers and more rigorous training are needed for to develop high-tech work force. Dr. Ruzycki, is addressing this gap with a $5 million “Supporting Effective Educator Development” (SEED) grant awarded to her in 2019 by the U.S. Department of Education. With the participation of 11 school districts in Florida and members of the Florida High Tech Corridor, as well as the involvement of other UF departments and colleges, she leads the effort to improve the pedagogy of STEM learning among K-9 students.

The EQuIPD model has three objectives: 1) Train teachers in ‘system thinking’ – how to incorporate inquiry, computational thinking, technology integration and engineering design into problem-solving. 2) Help teachers in grades K-9 develop lesson plans for using technical instruments, including sensors and probes, to demonstrate data collection and analysis. 3) Address the issue of how STEM learning affects the technology work force.

**Lastinger Center for Learning**

<https://lastinger.center.ufl.edu/>

The University of Florida Lastinger Center is an education innovation hub that blends cutting-edge academic research and practice to transform education. The center faculty create equitable educational systems where every child and educator, regardless of circumstances, experiences high-quality learning every day to support children’s achievement of critical milestones that are predictive of success in school and life.

The planning team identified four high-impact goals for the Center to pursue: 1) Integrate early learning Florida into the state’s quality improvement efforts and expand into other states; 2) Develop a statewide system to dramatically improve PK-12 literacy; 3) Expand algebra nation to additional content areas, grade levels, and states; 4 Identify, grow, and scale new innovations.

**UFTeach**

<https://education.ufl.edu/uf-teach/about/>

Dr. Tom Dana, Co-director, tdana@coe.ufl.edu

Dr. Kent Crippen, Professor of STEM education, kcrippen@coe.ufl.edu

UFTeach is a minor in teaching middle & high school mathematics or science. This minor can help strengthen skills to engage people in learning about mathematics or science for a career in teaching or any STEM field. UFTeach is an alternative certification program, officially recognized by the State of Florida as a “Professional Training Option (PTO) for Content Majors.”

In the UFTeach program, the person majors in a mathematics or science discipline while earning a specialized minor in education. The minor allows a mathematics or science major to complete the professional preparation coursework for teachers required by Florida State Board of Education Rule 6A-4.006(2), FAC, while completing the bachelor’s degree.

Highlights include:

* early and intensive field experiences in real classrooms
* deep-level understanding of mathematics and science content
* deep-level understanding of methods of effectively teaching mathematics and science content
* compact degree plan that allows most students to complete degree and Professional Training Option requirements in four years

**Center for Teaching Excellence**

<http://teach.ufl.edu/>

Jennifer K. Smith, Director, <http://teach.ufl.edu/about-us/>

The Center for Teaching Excellence is dedicated to keeping faculty, staff, and teaching assistants connected and informed. The goal is to help build a community of faculty members from all fields working together to share ideas and resources, to strengthen teaching, and maximize learning.

**Department of Family, Youth and Community Sciences**

<http://fycs.ifas.ufl.edu/> and

<https://fycs.ifas.ufl.edu/undergraduate/fycs-minors--certificates/>

The department offers courses in nonprofit leadership, research methods and design, program development and evaluation and grant writing which can be utilized for broader impacts. A minor in Family, Youth and Community Sciences uses coursework that surveys and analyzes communities, youth and families in various cultural contexts to prepare students with the skills they need to use social capital and to locate or create resources for problem solving.

**UF Library Digital Production Services (DPS)**

<http://ufdc.ufl.edu/>

The UF Library’s Digital Production Services (DPS) hosts the [UF Digital Collections (UFDC)](http://ufdc.ufl.edu/) which has more than 300 outstanding digital collections, containing over 14 million pages, covering over 78 thousand subjects in rare books, manuscripts, [antique maps](http://ufdc.ufl.edu/maps), [children's literature](http://ufdc.ufl.edu/baldwin), newspapers, [theses and dissertations](http://ufdc.ufl.edu/ufetd), data sets, photographs, [oral histories](http://ufdc.ufl.edu/oral), and more for [permanent access and preservation](http://ufdc.ufl.edu/sobekcm/preservation). Through UFDC, users have free and [Open Access](http://www.uflib.ufl.edu/oa/) to full unique and rare materials held by the University of Florida and [partner institutions](http://ufdc.ufl.edu/partners).

The UF Libraries [encourage and support faculty collaboration](http://ufdc.ufl.edu/contact) on digital collections and digital scholarship.

UFDC is constantly growing with new resources, new scholarship, and system enhancements to the Open Source [SobekCM Software](http://sobekrepository.org/sobekcm).

**UF Thompson Earth Systems Institute**

<https://www.floridamuseum.ufl.edu/earth-systems/>

Dr. Bruce MacFadden, Director, bmacfadd@flmnh.ufl.edu

Started in 2018, the mission of the UF Thompson Earth Systems Institute is to advance communication and public understanding of current research discoveries about Earth’s natural systems — air, water, land and life — in Florida, and beyond.

Earth’s natural systems include the atmosphere, oceans, land, polar ice caps and glaciers, and life. Intrinsically connected, these systems affect one another and result in global change that profoundly impacts the future of our planet. Only by understanding the way the Earth’s systems interact, we will be poised to fully understand the ways human activity affects the natural environment in which we live.

Centered at the Florida Museum of Natural History, the UF Thompson Earth Systems Institute harnesses the research discoveries of faculty and students from participating colleges at the University of Florida that will help influence legislation and foster new research with global implications.

Using innovative communication and technology, these discoveries will be made available to K-12 educators, community scientists, and various interested public and private stakeholders. Likewise, through general education courses in Florida’s natural systems and related topics, undergraduates will have the opportunity to graduate from UF empowered to make decisions that directly affect the future of Florida’s natural systems, and beyond.

**NeurAL Lab**

<http://www.antonenko.org/lab/>

Dr. Pavlo “Pasha” Antonenko, Director, p.antonenko@coe.ufl.edu

Neuroscience Applications for Learning (NeurAL) Laboratory is a team of faculty and students who use cognitive and social neuroscience methodologies and technologies to explore how people learn individually and in groups. The focus is on the learners who exhibit a wide range of attentional and cognitive differences (e.g., inhibitory control, spatial ability, working memory capacity, reading ability etc.) Studies are designed using (or replicating) the authentic learning contexts of the 21st century and produce implications for improving the design and practice of learning and teaching.

NeurAL Lab research has been funded by the National Science Foundation (Science of Learning, Cyberlearning and Future Technologies, GoLife, and Improving Undergraduate STEM Education programs), the National Aeronautics and Space Administration, and the University of Florida (College of Education Research Incentive Fund and UF Research Opportunity Fund). The team members value collaboration and like to discuss potential projects with interested faculty.

**Department of Engineering Education**

<https://www.eng.ufl.edu/eed/faculty-staff/>

Dr. Hans Van Oostrom, Director, oostrom@ufl.edu

Dr. Pamela Dickrell, Associate Director for Education, pld@ufl.edu

Dr. Elliot Douglas, Associate Director for Research, edouglas@ufl.edu

The Department of Engineering Education was formed in June 2019. The department specializes in engineering education research and the delivery of innovative and effective instructional methods in engineering undergraduate courses, as well as assessment. The department faculty design and teach large enrollment undergraduate engineering courses that span multiple majors using methods that promote conceptual understanding and student retention. The department performs research into the effectiveness of learning methods, and continually strive to improve and adapt course content and delivery methods to serve students and faculty throughout the Herbert Wertheim College of Engineering.

Dr. Osstrom’s research interests are digital literacy education and precision learning. He currently leads the Digital Literacy Moonshot (<http://explore.research.ufl.edu/digital-literacy.html>) to develop iClassroom. The program location will be in the Data Science and Information Technology building, once planned $70M (150,00 sqft) building is finished (next to Larsen Hall).

Dr. Dickrell focuses on effective teaching methods and hands-on learning opportunities for undergraduate student engagement and retention. Her educational research focus is on first and second year student experiences, hands-on makerspace based learning, and building inclusive courses for diverse student populations.

Dr. Douglas’ research interests lie at the intersection between education research and engineering education practice. His work aims to understand complex thinking processes and learning in students, and to use this information to design effective teaching practices, and includes research in critical thinking, active learning, problem-solving, and cultures of inclusion in engineering.

**Streaming Science Program**

<https://streamingscience.com/>

Dr. Jamie Loizzo, Program Expert, Assistant Professor, Department of Agricultural Education and Communication (AEC), jloizzo@ufl.edu

Dr. Loizzo’s classes are focused in the agricultural communication specialization, where she incorporates both science communication and technology into her teaching style. She founded Streaming Science, a project-based learning and mobile electronic field trip program for 21st Century science communication education, and has been working with a team of researchers and developers to create the MOOCocracy platform (<https://moococracy.org/> )– an online, learner-centered, social democracy for engaging in global social issues.

Streaming Science is a college student-driven project-based learning science literacy program. The mission of Streaming Science is to introduce public audiences, especially middle and high school students and teachers, to real-world scientists and critical agricultural and environmental research through multiple interactive communication platforms. Through a series of courses and experiences students are developing videos, podcasts, and live interactive electronic field trips with iPad multimedia backpack communication kits. We invite you to watch our videos, listen to our podcasts, and engage with science topics that impact your everyday life! Streaming Science was founded at the University of Nebraska-Lincoln and invites contributing institutions, science communication students, and scientists to join.

**Impact of Materials on Society Course**

<https://www.mrs.org/impact-of-materials-on-society> (click for course modules)

Dr. Kevin Jones, Course Developer and Contact Person, kjones@eng.ufl.edu

The Impact of Materials on Society subcommittee partnered with faculty from engineering, liberal arts and sciences and education at the University of Florida to develop an introductory level course suitable for undergraduate and community college students. This course teaches students that engineering shapes and is shaped by social and cultural variables, and that a career in engineering is not only about math and science, but also about social problem-solving. This project aims to build creative thinking by giving students enough exposure to the cultural and physical dimensions of materials and materials science to enable them to see current engineering problems in new ways, and to think globally as well as locally. By targeting this class to first-semester students, it will enable students to draw lasting, creative connections between their general education requirements and core materials science and engineering curricula throughout their undergraduate careers.

**Digital Worlds Institute**

<https://digitalworlds.ufl.edu/>

Dr. James Oliverio, Executive Director, oliverio@ufl.edu

UF’s Digital Worlds Institute is on the cutting edge of digital arts and sciences. The Institute combines arts, communications, engineering and science, with a focus on advanced media systems. The “Research, Education, and Visualization Environment” (REVE) is the Institute’s teaching, research and development facility in Old Norman Gym. Its spaces are designed for research and education and feature collaborative environments with numerous technological capabilities including.

* The Polymodal Immersive Classroom Theater (PICT), a panoramic venue that hosts audiences for ultra-widescreen media, interactive games, digital performing arts events, and OnCampus-OnLine real-time classroom teaching and learning
* The Virtual Production Studio (VPS), an open-space stage with a large green screen, large white cyc, motion capture, audio, and video recording technologies.
* Three Digital Media Suites, housing production and post-production systems, including digital video editing and compositing, animation, and audio post-production capabilities.
* THE GYM is a dynamic, state of the art workspace that cultivates creativity and collaboration. With the flexibility to seamlessly transition from a classroom to a collaborative workspace. Students work closely with faculty and staff exploring digital production, animation, and game design.
* The Online/OnCampus Research Classroom, designed to facilitate interactive, real-time learning with both on campus and online Digital Arts & Sciences (DAS) students.
* Digital Worlds Reality Lab: It is built for 21st-century teaching and learning. It boasts a three-screen rear projection display and collaborative space for game design and interactive learning. With classes like 3D Animation and Modeling being taught there, it has become the epicenter for interdisciplinary student work in creating serious and applied gaming environments, using tools like the KINECT and other new devices and software being pioneered at UF Digital Worlds.

**Evaluation Resources**

**Center for Precollegiate Education and Training (CPET)**

<http://www.cpet.ufl.edu>

Dr. Mary Jo Koroly, Director, korolymj@ufl.edu

The Center for Precollegiate Education and Training (CPET) is uniquely poised as a University of Florida Center with expertise in research education, outreach, and evaluation. CPET has a 60-year history of partnering with the university community to provide content-rich, immersive STEM experiences and career explorations for K-14 teachers and students and to evaluate the outcomes and impacts of a diverse portfolio of programming.

CPET supports the research and evaluation of all education, training, and outreach activities, regardless of scale, employing a mixed methods approach. Example methods include: needs assessment studies to inform program development; survey and assessment instrument development; mind and concept mapping for cognitive and affective changes; interviews and focus groups for case studies and ethnographic investigations; content analysis of participant artifacts; and quasi and experimental design.

**Collaborative Assessment and Program Evaluation Services (CAPES)**

Dr. M. David Miller, dmiller@coe.ufl.edu

The mission of Collaborative Assessment and Program Evaluation Services (CAPES) is to provide researchers at the University of Florida with timely and appropriate support for program evaluation and research for educational, training and social science programs. Evaluation services include formative assessments to provide for program improvement and summative assessments to inform accountability. The types of methodological assistance provided by CAPES include:

* comprehensive evaluation planning, implementation, and reporting
* survey development, analysis and reporting
* development of assessments including piloting and psychometric analysis
* advanced psychometric techniques including methods based on classical test theory, item response theory, factor analysis, and generalizability theory
* applied statistical analysis including hierarchical modeling, structural equation modeling, and general linear modeling
* mixed method evaluations

CAPES works with clients to understand their needs and addresses those needs with the support of its staff of evaluators, measurement specialists, and applied statisticians. Services may be provided through cooperative writing and submission of grants or through hourly consulting services.

**Department of Family, Youth and Community Sciences**

<http://fycs.ifas.ufl.edu/>

The department has several faculty members with evaluation expertise who have experience in development and implementation of evaluation designs and logic models.

**Program Development and Evaluation Center (PDEC)**

<http://pdec.ifas.ufl.edu/>

Dr. Amy Harder, amharder@ufl.edu

PDEC’s mission is to add value to UF/IFAS Extension through improved program development and evaluation processes and the enhancement of professional competencies based on the science of Extension.

Supports Faculty in Programming

* teaches in-service education programs
* assists and organizes needs assessment surveys
* conducts situational analyses using socio-demographic data
* provides guidance in implementing educational programs
* designs frameworks for long-range planning
* develops publications and how-to handouts on programming

Supports Faculty in Evaluation

* teaches in-service education programs
* assists and organizes evaluation surveys
* identifies impact measures and guides impact studies
* develops publications and how-to handouts on evaluation

Enhances Program Quality

* coordinates county program reviews
* uses evaluation data for demonstrating value to key stakeholders

Maintains State Accountability Data

* coordinates UF/IFAS evaluation and accountability efforts
* designs and assembles POW & ROA databases
* analyzes management data to assess organizational performance
* coordinates the preparation of accountability reports
* researches new model and strategies for accountability systems

**Outreach Resources**

**Center for Precollegiate Education and Training (CPET)**

<http://www.cpet.ufl.edu>

Dr. Mary Jo Koroly, Director, korolymj@ufl.edu

The Center for Precollegiate Education and Training (CPET) is uniquely poised as a University of Florida Center with expertise in research education, outreach, and evaluation. CPET has a 60-year history of partnering with the university community to provide content-rich, immersive STEM experiences and career explorations for K-14 teachers and students and to evaluate the outcomes and impacts of a diverse portfolio of programming.

CPET promotes and supports K-14 teachers, secondary school students, and the public at-large by providing valuable engagement and access to research faculty and facilities across the University of Florida. CPET hosts and administratively facilitates a wide range of activities including summer research explorations and apprenticeship programs for teachers and students, state and local community outreach (Florida Symposium, workshops on campus or at school sites, festivals, Mini Medical Schools), and innovative on-line curricula, data-bases, and other resources.

**Florida Museum of Natural History**

<http://www.flmnh.ufl.edu/>

Dr. Bruce MacFadden,bmacfadd@flmnh.ufl.edu

Presentation: Broader Impacts and the Museum <http://www.research.ufl.edu/research-program-development/research_program_development_docs/Broader%20Impacts%20and%20the%20Museum.pdf>

**Harn Museum of Art**

<http://harn.ufl.edu>

Dr. Eric Segal, Director of Education and Curator of Academic Programs, esegal@harn.ufl.edu

As a university art museum dedicated to serving UF and the community, the Harn may be an exciting partner for broader impact outreach efforts. Through Academic Programs division, and with the support of other departments throughout the museum, the Harn supports the work of faculty, students and staff at UF. The Harn’s collection totals more than 10,000 objects including African, Asian, modern and contemporary art, and photography with significant representations of Ancient American and oceanic art, as well as a growing collection of natural history works on paper. The museum offers a robust exhibition schedule and dynamic public programs for university and community audiences. Broader impact opportunities may include activities during Harn Museum Nights (<http://harn.ufl.edu/museumnights>), Faculty Focus exhibitions and museum learning programs (<http://harn.ufl.edu/universityeducators>). We are glad to brainstorm other ways in which the museum can support grant proposals with authentic research/museum connections. Contact Eric Segal, Director of Education and Curator of Academic Programs, to discuss your project.

**Center for Undergraduate Research**

<http://cur.aa.ufl.edu/>

Dr. Anne Donnelly, adonnelly@aa.ufl.edu

Undergraduate research provides opportunities for students to engage faculty, graduate students, postdocs to discover and define scholarly interests. Research experiences can assist students in evolving ideas and deciding on a future career path. The Center for Undergraduate Research can help in making connections between PIs doing research and undergraduates who wish to work on that research.

* [UF Undergraduate Research Database](http://cur.aa.ufl.edu/undergraduate-research-database.aspx)
* [Beckman/Provost’s Scholars Program](http://cur.aa.ufl.edu/beckmanprovosts-bsp-scholars.aspx)
* [Research Programs](http://cur.aa.ufl.edu/research-.aspx)

**IFAS Extension**

<http://solutionsforyourlife.ufl.edu/>

County Extension Offices - <http://sfyl.ifas.ufl.edu/map/index.shtml>

Extension is a partnership between state, federal, and county governments to provide scientific knowledge and expertise to the public. UF, together with [Florida A&M University](http://www.famu.edu/cesta/main/index.cfm/cooperative-extension-program/about-the-cooperative-extension-program/) (FAMU), administers the Florida Cooperative Extension Service.

At the University of Florida, Extension is located in the [Institute of Food and Agricultural Sciences](http://www.ifas.ufl.edu/) (IFAS), along with the [College of Agricultural and Life Sciences](http://www.cals.ufl.edu/) (CALS) and the [Florida Agricultural Research and Education Center](http://research.ifas.ufl.edu/), and is called UF/IFAS Extension. Extension offices throughout the state and other existing platforms, including the Solutions for Your Life publications website, offer opportunities for broad dissemination of scientific knowledge that will impact the lives of Floridians.

**UF/IFAS Center for Public Issues** **Education in Agriculture and Natural Resources (PIE Center)**

<http://www.piecenter.com/>

Dr. Ricky Telg, Director, rwtelg@ufl.edu

The UF/IFAS Center for Public Issues Education in Agriculture and Natural Resources (or "PIE Center") examines how people think about, form, and act on opinions regarding complex agricultural and natural resources issues. The PIE Center's research and educational programs help enable the public and policymakers to make informed decisions about Florida's agriculture and natural resources sectors, specifically in these three areas:

1. Ensure Floridians' responsible use of water and conservation of natural resources.
2. Equip Florida communities and organizations to understand and adapt to changing agricultural and natural resources issues.
3. Identify communication strategies to support and grow Florida's food and agricultural economy.

**Sustainable UF**

<http://sustainable.ufl.edu/>

Matthew Williams, Director, miwilliams@ufl.edu

The mission of the Office of Sustainability is to make the University of Florida - in its operations, education, research, and outreach - a model of sustainability, integrating the goals of ecological restoration, economic development, and social equity. In pursuing this mandate, the Office of Sustainability will encourage and facilitate the collaborative efforts of faculty, students, and staff to generate knowledge, acquire skills, develop values, and initiate practices that contribute to a sustainable, high quality of life on campus, in the state of Florida, and across the globe. Programs include both initiatives to increase the sustainability of UF’s practices across its research, teaching, and extension missions as well as outreach efforts to educate the broader community in relevant areas. For more information, please contact Matt Williams.

**Florida Energy Systems Consortium (FESC) Public Outreach**

<http://floridaenergy.ufl.edu/> and <http://floridaenergy.ufl.edu/public-outreach/>

Janan Balaban, Associate Director, cbalaban@ufl.edu

FESC outreach program leverages the existing network of UF extension offices to reach out to public. The goal of the program is to develop educational outreach programs and materials designed to deliver practical, applicable information on energy-related topics to the general public as well as targeted specific audiences such as builders, planners, engineers, architects, small businesses, local governments, and utilities.

Some examples of FESC Outreach activities are:

1. **Energy/Climate Awareness fact sheets**: Over 50 fact sheets were developed by Dr. Pierce Jones, Director, Program for Resource Efficient Communities at the University of Florida, and his team. They are posted at <http://floridaenergy.ufl.edu/public-outreach/energy-fact-sheets/>. These publications are also available online through the Energy Education Library, located on the [Florida Department of Agriculture and Consumer Services](http://www.myfloridahomeenergy.com/help/library/#sthash.DMtAx54t.dpbs) website.  New fact sheet categories/fact sheets are added as they are developed.
2. **Energy Extension Service:** UF/IFAS’ Cooperative Extension Service has offices and educational professionals in all of Florida’s counties. The fact sheets were shared by public through these offices.
3. **Sustainable FloridiansSM Program :** The mission of the Sustainable FloridiansSM program is to guide Floridians on how to take individual responsibility for protecting Earth’s limited resources. Through a discussion-to-action format, the program educates participants about making wise use of resources, making households and communities more resilient and financially sound, and understanding the impact of individual lifestyle choices. Through the Sustainable FloridiansSM program participants learn that energy is a part of everything we do in our lives. Many consumer-oriented programs advertise solutions to address various challenging consumer needs. Yet, solutions are often only relevant to a specific and temporary point in space. Additionally, true differentiation between a problem and a solution requires reflection and intention. In other words, overcoming constraints and realizing new opportunities necessitates that citizens contemplatively look back and consciously move forward toward goal achievement within their community. In terms of offering “solutions,” the Sustainable FloridiansSM program develops and iteratively refines its curriculum to provide “enablers” and produce “change agents.” The program was led by the Program for Resource Efficient Communities at the University of Florida.
4. **FESC Website (**<http://floridaenergy.ufl.edu/>**):**  The FESC website is an important communication tool to disseminate information. It is updated regularly to remain current and to better serve the users.

**Department of Family, Youth and Community Sciences**

<http://fycs.ifas.ufl.edu/>

Website provides research-based information, resources, and tips for families, consumers, and educators.

**The Digital Production Services**

<http://digital.uflib.ufl.edu/>

The University of Florida Digital Collections (UFDC) hosts more than 300 curated digital collections and over 900 general collections, containing over 13 million pages, covering over 78 thousand subjects in rare books, manuscripts, antique maps, children's literature, newspapers, theses and dissertations, data sets, photographs, oral histories, and more for permanent access and preservation. Through UFDC, users have free and Open Access to full unique and rare materials held by the University of Florida and partner institutions.

The George A. Smathers Libraries and Digital Production Services encourage and support faculty collaboration on digital collections and digital scholarship through partnerships on grants, research and publications.

The Digital Production Services department serves as a digitization facility for the George A. Smathers Libraries and is the primary contributor to all of the collections in the UFDC, adding unique collection materials regularly.

The George A. Smathers Libraries established and supports the IR@UF in order to offer a central location for the collection, preservation, and dissemination of scholarly, research, and creative production alongside historical materials from the University of Florida. The historical materials provide context for research and researchers, enabling insight into the history, nature, and culture of the University.

The Institutional Repository at the University of Florida (IR@UF) is a digital platform designated as the permanent archive for scholarly works created by individuals in the UF community. Hosted by the George A. Smathers Libraries, works in the IR@UF are open to researchers world-wide, are archived upon submission in three different locations, and are assigned a permanent, stable URL.

**Sea Grant Florida**

<http://www.flseagrant.org/>

Dr. Sherry Larkin, Interim Director, Slarkin@ufl.edu

Florida Sea Grant uses academic research, education and extension to create a sustainable coastal economy and environment. We are a partnership between the Florida Board of Education, the National Oceanic and Atmospheric Administration and Florida's citizens, industries, and governments. Florida Sea Grant’s mission is to support integrated research, education and extension to conserve coastal resources and enhance economic opportunities for the people of Florida.

**UF International Center**

<https://internationalcenter.ufl.edu/>

Office for Global Research Engagement - <https://internationalcenter.ufl.edu/faculty-engagement/international-research>

Dr. Susanne Hill, Executive Director & Director, Study Abroad Services, shill@ufic.ufl.edu

Dr. Sandra Russo, Director, Office for Global Research Engagement, srusso@ufic.ufl.edu

UF’s International Center and the Office for Global Research Engagement (OGRE) is committed to supporting international and cross-cultural research in every discipline by promoting a culture of excellence in the development of international scholarship and education. OGRE supports faculty, staff, and student initiatives in developing programs and disseminating advances in research that further the internationalization efforts of the university. The unit serves as a connector among the many, diverse international research programs at UF promoting and disseminating academic excellence.

OGRE recognizes that engaging in international research expands the UF network, providing access to new, creative, and innovative global opportunities. To advance international research, OGRE engages in outreach activities that support faculty interests in international research; provides workshops on topics in support of international research; offers technical assistance for international research proposals and projects; leads faculty development programs to facilitate research activity abroad; supports doctoral students to engage in research internationally; and provides funding to faculty for international field work.

**Entrepreneurship and Innovation Center (EIC)**

<https://warrington.ufl.edu/entrepreneurship-and-innovation-center/>

<http://www.ufyoungentrepreneurs.org/>

Dr. Jamie Kraft, Director, Entrepreneurship Program, jamie.kraft@warrington.ufl.edu

The University of Florida’s Entrepreneurship & Innovation Center (EIC) was established in 2000 in the Warrington College of Business with a campus-wide mission to teach, coach, and inspire students to be entrepreneurial in their lives. The Center provides students the tools and experiences necessary to creatively pursue new opportunities and innovations in the start-up, social, and corporate venture arenas.

Through courses, degree programs and complementary activities such as speakers and workshops, the Center currently serves more than 2,000 students per year. Partnering with other colleges at the University, the Center delivers introductory and specialized courses at both the graduate and undergraduate level, and offers every graduate student at the University of Florida the option to earn a graduate minor in entrepreneurship.

In addition, the [Jeff Gold Experiential Learning Laboratory](https://warrington.ufl.edu/entrepreneurship-and-innovation-center/student-engagement/gold-learning-lab/)—which houses the [GatorNest](https://warrington.ufl.edu/entrepreneurship-and-innovation-center/student-engagement/gatornest/) program, the [Gator Hatchery](https://warrington.ufl.edu/entrepreneurship-and-innovation-center/student-engagement/gator-hatchery/) student incubator and the IdeaGators Co-Working Space—provides students the opportunity to experience real life entrepreneurship while still in school. Co-curricular programs that include consulting to disadvantaged entrepreneurs in South Africa and our community partnerships in Gainesville, FL, as well as the $40,000 Big Idea Competition, provide additional opportunities to “learn and do”, helping students create an innovative and entrepreneurial mindset.

The Center offers the nation’s most comprehensive specialized degree program focused on entrepreneurship, the [Thomas S. Johnson Entrepreneurship Master’s Program](https://warrington.ufl.edu/master-of-science-in-entrepreneurship/)

* ***Jeff Gold Experiential Learning Laboratory:*** Provides students an environment whereby they can learn through experiences, including both success and failure… it serves as the focal point for many of the Center’s Experiential Learning offerings including:
* GatorNest Consulting Program: GatorNest is a hands-on, real world, consulting experience intended to teach entrepreneurship and innovation by working through the real problems of real companies. The course also teaches skills such as goal setting, team management, and handling various team dynamics in an unscripted environment. GatorNest’s mission also goes beyond the classroom learning experience as it was created with the intention of stimulating the economy of the Gator Nation by assisting in the growth of local startups.
* Integrated Technology Venture (ITV) Program
* Entrepreneur-In-Residence Program
* Student Mentoring Program
* Entrepreneurship Accelerator Program

The Lab is housed inside the UF Entrepreneurship & Innovation Center and is juxtaposed next to the offices of faculty and staff as well as the student Innovation Café

*Other programs offered by the center are:*

* ***Gator Hatchery*:**

The Gator Hatchery is a Student Incubator that offers student entrepreneurs workspace, office support, mentors and other resources necessary for a startup to succeed faster. Hatchery businesses will have access to the Entrepreneurship Center’s network of individuals, companies and other resources fledgling companies may find valuable. Let us help you grow your hatchling idea into a bull gator!

Hatchery residents will be priority clients for the UF Entrepreneur Law Clinic (corporate and transactions) and the A2 Fab Lab, which provides services and equipment for prototyping and 3D printing.

* ***Women’s Entrepreneurship Symposium*:** The annual symposium offers inspirational stories and lessons learned from successful women entrepreneurs. The event provides opportunities for women to connect with peers and other successful female business leaders to foster a community of women in entrepreneurship where they benefit through mentoring, network building, start-up and career advice, internships and role models.
* ***Big Idea Competition and Business Plan Lab:*** The Big Idea Gator Business Plan Competition was created to help students grow their business ideas. It is a four month competition in the spring where teams of students begin by creating growth-oriented business models. These teams go on to research and produce rough drafts to complete business plans. The top 4 teams compete for a chance to win over $40,000 in prizes. The Center offers mentoring and various other helpful resources along the way.
* ***JumpstART Design Thinking:*** JumpstART is a program that empowers students in arts, engineering, and entrepreneurship through collaborative exploration, discovery, divergent thinking and professional mentorship. It is supported by the College of the Arts, the UF Entrepreneurship & Innovation Center, the UF Engineering Innovation Institute, and the College of Journalism and Communications. Special support is also provided by Duane Bray and IDEO.

Aims to serve the broad range of both graduate and undergraduate students at The University of Florida ...

* ***Student Entrepreneurship Club (eclub) - Entrepreneurship Collective:*** Aims to serve the broad range of both graduate and undergraduate students at the University of Florida seeking to engage in the topics of entrepreneurship, creativity, and innovation in educative and social capacities by fostering a strong network of like-minded individuals in order to provide value to others in the Entrepreneurship Collective, the Gainesville Community and the world. Eclub organizes a diverse speaker series, creative workshops, monthly socials and networking events. Eclub also hosts and participates in numerous startup events like Startup Weekend, 3 Day Startup, venture pitch competitions and more. Eclub has access to mentoring and coaching opportunities from successful entrepreneurs and various investors.
* ***TEDxUF:*** Each year EIC works with a student team to organize the TEDxUF program in partnership with the global TED organization, and opens the event to the community, annually attracting more than 1,500 attendees.
* ***Entrepreneurship Faculty Fellows:***

The program is open to all full-time UF faculty members, including those from all disciplines and academic areas on the campus. The program seeks academic entrepreneurs or faculty interested in integrating an entrepreneurial mindset and related concepts, tools, and frameworks into their home discipline; particularly into their research, teaching, or outreach activities. If accepted to the program, the Fellow is jointly appointed to her/his home department and the Entrepreneurship & Innovation Center in the Warrington College of Business. Small pools of financial support are available to assist with the project they undertake. In addition to this project, fellows get together for informal monthly lunches to discuss what each is doing and explore interdisciplinary questions related to entrepreneurial behavior, and the nature of an entrepreneurial university. An annual forum, open to the entire university community, is held to feature the activities of the Fellows. Fellows are typically appointed for up to three years, although the appointment is renewable.

* ***Silicon Valley Immersion Program:***  This program is an immersion program offered during the spring semester providing students with an intense exposure to entrepreneurship and the entrepreneurial eco-system in Silicon Valley (including San Francisco). The program includes pre-trip group work, Spring Break travel and interaction with entrepreneurs and investors, and post-trip reflection.
* ***Young Entrepreneurs for Leadership & Sustainability (YELS)*:** The UF Young Entrepreneurs for Leadership & Sustainability summer program gives college bound high school students the opportunity to live, work, eat, and play on the campus of the University of Florida for four weeks each summer while learning about entrepreneurship and social entrepreneurship, being inspired to solve social problems, and practicing sustainability. We empower students to become leaders and changemakers.
* ***Gainesville Entrepreneurship & Adversity Program (GEAP):*** An integrated, multi-faceted program to empower those living in poverty or adverse circumstances to create and grow their own businesses. Local entrepreneurs are assisted over 12 months with training, consulting, mentoring, micro-credit and in-kind resources.
* ***National Disabled Veterans Entrepreneurship Program (VEP)***: VEP provides a rigorous entrepreneurial learning and development opportunity for veterans with service-connected disabilities and those who have uniquely distinguished themselves in the military. VEP is designed for veterans interested in starting a new venture as a means to financial independence and for veterans who have an existing business for which they would like to increase profits.
* ***Women’s Collaboratory for Woman Innovators:*** Located in the UF Innovation Hub, [the Collaboratory for Women Innovators](https://innovate.research.ufl.edu/the-hub/collaboratory/) seeks to inspire, educate, and empower women to attain leadership in all phases of the innovation lifecycle. Programs and resources will support women starting their own companies, as well as to increase participation of female inventors/researchers. Additional activities provide opportunities for women to learn more about innovation, entrepreneurship and leadership and connect with like-minded people and mentors.

**UF Center for the Humanities and the Public Sphere (CHPS)**

<http://www.humanities.ufl.edu>

Founded in 2005 and launched in 2009, the Center for the Humanities and the Public Sphere in the College of Liberal Arts and Sciences at the University of Florida is directed by Dr. Barbara Mennel, Associate Professor of English and German. The Center has three interrelated purposes:

* to facilitate and promote the research programs of humanities scholars at UF,
* to provide an intellectual space and a physical location within the University and College of Liberal Arts and Sciences for critical and collaborative discussions of the humanities that reach across and beyond individual disciplines, and
* to provide a place for outreach to the community in which we live and teach.

Building on the work of individual departments, the Center for the Humanities and the Public Sphere emphasizes collaboration and critical discussion as its basic program models.

The CHPS maintains several funding programs that enable faculty to explore the broader impacts of their work, particularly the **Interdisciplinary Team-Teaching Program in the Humanities, Library Enhancement Grants** (which can be used to create digital projects and databases), the **Support for Workshops and Speaker Series**, and **Programs in the Public Humanities Grants,** (which offers funds to teams of UF and community collaborators to support community-focused humanities projects). More information about these opportunities can be found at: https://humanities.ufl.edu/fellowships-and-grants/

Since 2009, the University of Florida is proud to be a member-institution of [Imagining America (IA)](http://www.imaginingamerica.org/), a nationwide consortium of colleges and universities committed to strengthening public scholarship and practice in the arts, humanities, and design. In support of this mission, the CHPS gathers resources to assist faculty interested in doing work in the **Public Humanities** and in the **Digital Humanities**.

CHPS also help faculty outside the humanities to identify potential research partners for grant proposals, research projects, and team-teaching initiatives. This includes scholars interested in exploring the humanities dimensions (e.g., history, culture, ethics, theory, or criticism) of the sciences, engineering, business, law, agriculture, or other research areas. CHPS is affiliated with several cross-college working groups, including [Environmental Humanities](https://sites.google.com/site/ufenvhum/), [Digital Humanities](http://ufdc.ufl.edu/digitalhumanities), and [Medicine and Culture](https://cismac.humanities.ufl.edu/).

**NSF-Funded Outreach Programs**

**Research Experiences for Undergraduates (REU)**

<http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517&org=NSF>

The Research Experiences for Undergraduates (REU) program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program. REU supplements are available for many NSF funding mechanisms; consult with your NSF program officer for details.

UF offers REU programs in the following areas:

* Chemistry: <http://www.reu.chem.ufl.edu/>
* Physics/Materials Science: <http://www.phys.ufl.edu/REU/>
* Gravitational Physics (International REU): <http://www.phys.ufl.edu/ireu/>
* Marine Bioscience: <http://reu.whitney.ufl.edu/>
* College of Engineering (Contact Elliot P. Douglas: edoug@mse.ufl.edu )

*Contact the individual programs for more information.*

**See also:** <https://cur.aa.ufl.edu/resources/uf-summer-research-experiences/>

**Center for Precollegiate Education and Training (CPET)**

<http://www.cpet.ufl.edu>

Dr. Mary Jo Koroly, Director, korolymj@ufl.edu

CPET research education and outreach programs include (1) mentored research opportunities for talented high school students and teachers; (2) multi-disciplinary content-rich laboratories and classroom follow-up for in-service teachers; (3) integrating research processes and product knowledge with national education standards to increase STEM literacy and workforce/career preparation for all students; (4) opportunities for professional development in teaching, communication, and public outreach for graduate students; and (5) assistance in developing and conducting measurably effective educational outreach to broaden the impacts of faculty research.

**Recruitment/Retention of students in groups traditionally underrepresented in STEM disciplines**

Refer to document: [Recruitment & Retention Resources to Enhance Diversity](http://www.research.ufl.edu/research-program-development/research_program_development_docs/Recruitment_to_Enhance_Diversity.pdf)