Florida Statewide Symposium
BEST PRACTICES
in Undergraduate Research
Undergraduate Research for All Students
Oct. 22-23, 2021
Gainesville, Florida
Schedule

FRIDAY, OCTOBER 22ND

REGISTRATION 11am - 1pm
OPENING REMARKS 1pm - 1:30pm
  Senate Chamber, Ground  Angela Lindner
KEYNOTE 1:30pm - 2:30pm
  Senate Chamber, Ground  David Fakunle
PANEL DISCUSSIONS 2:40pm - 3:25pm
  Room G320
  Room G330
MINI PRESENTATIONS 3:30pm - 4:05pm
  Room G320
  Room G330
INTERACTIVE PRESENTATIONS 4:15pm - 5:00pm
  Room G320
  Room G330
POSTER SESSION AND RECEPTION 5:30pm - 6:30pm
  Dauer Hall - Keene Faculty Center
DINNER ON YOUR OWN 6:30pm - 8pm
Florida Statewide Symposium
BEST PRACTICES
in Undergraduate Research
Undergraduate Research for All Students

Schedule

SATURDAY, OCTOBER 23RD

BREAKFAST, COFFEE AND CONVERSATION
8:30am - 9am
Senate Chamber, Ground Floor

PLENARY SPEAKER
9am - 9:50am
Jose Valentino Ruiz
Senate Chamber, Ground Floor

INTERACTIVE PRESENTATIONS
10am - 10:50am
Room G320
Room G330

PANEL DISCUSSIONS
11am - 11:50am
Room G320
Room G330

LUNCH
12pm - 12:45pm

INTERACTIVE PRESENTATIONS
12:45pm - 1:30pm
Room G320
Room G330

MINI PRESENTATIONS
1:40pm - 2:40pm
Room G320
Room G330

INTERACTIVE PRESENTATIONS
2:45pm - 3:30pm
Room G320
Room G330

CONFERENCE WRAP UP
3:30pm - 4pm
Anne Donnelly, PhD
Senate Chamber, Ground Floor
Keynote Speakers
José V. Ruiz-Resto
Assistant Professor, University of Florida, School of Music
EMMY® Award Winning and GRAMMY® Award Winner

An expert in music & media, television, global outreach & community development, and education industries, Dr. José Valentino Ruiz, Ph.D., D.Min. is considered by many to be a multi-hyphenate who holds the distinction of being an EMMY® Award Winning producer, a GRAMMY® Award Winning composer, GRAMMY® Award Winning album audio engineer, a Multi-GRAMMY® Award Nominated artist and producer, a 52-time DOWNBEAT® Music Award Winning performer, engineer, bandleader, and audio engineer (record holder), the AVA Digital® Award Winner (Gold Medal) producer, a national-level doctoral dissertation finalist, SAEE Research Impact Award finalist, and an internationally-acclaimed multi-instrumentalist known for his passionate performances, versatility, and fluid expression in cross-generational and cross-cultural styles. To date, Dr. Ruiz has performed in 1300+ concerts and has produced 90+ albums.

Dr. Ruiz is the CEO, Consultant, and Record Producer at JV Music Enterprises; Resident Composer/Music Producer at Hayden 5; and Head & Inaugural Professor of Music Business & Entrepreneurship at the University of Florida. Additionally, he serves as Director of Global Entrepreneurship Initiatives for the Diaz Music Institute 501C3 and Global Ambassador for Worldwind Music UK Co. Ltd. Dr. Ruiz's research aims to uncover best practices for teaching and engaging in arts entrepreneurial endeavors that foster (1) enterprise scalability, (2) successful predictive modelling, and (3) multi-level societal amelioration, both culturally and chronologically, within the in-person and digital creative economies.
David Olawuyi Fakunle, Ph.D. is a “mercenary for change,” employing any skill and occupying any space to help elevate everyone divested from their truest self, especially those who are Black, Indigenous and People of Color. Dr. Fakunle serves as Adjunct Assistant Professor at the University of Florida Center for Arts in Medicine, and Associate Faculty in the Mental Health department of the Johns Hopkins Bloomberg School of Public Health.

Dr. Fakunle's interests include stressors within the built environment, societal manifestations of racism, and the use of arts and culture to strengthen health, equity, and ultimately liberation.

Additionally, Dr. Fakunle has applied artistic and cultural practices such as Black storytelling, African drumming, singing and theater in the proclamation of his truth for over 20 years, collaborating primarily with organizations in the Baltimore/Washington, D.C. region. Among many affiliations Dr. Fakunle is co-founder and CEO of DiscoverME/RecoverME, an organization that utilizes the African oral tradition to empower use of narrative for healing and growth, and serves as Chair of the Maryland Lynching Truth and Reconciliation Commission, the first state-level commission in the U.S. dedicated to chronicling and bringing justice to racial terror lynchings.
SYMPOSIUM SCHEDULE | FRI, OCT 22

11AM - 1PM | REGISTRATION
Senate Chamber, Ground Floor, Reitz Union

1PM - 1:30PM | WELCOME AND ORIENTATION
Senate Chamber, Ground Floor, Reitz Union
Dr. Angela Lindner, Associate Provost, University of Florida

1:30PM - 2:30PM | KEYNOTE PRESENTATION
Senate Chamber, Ground Floor, Reitz Union
What’s the Story of Your Research...and IN Your Research?
Dr. David Fakunle, Assistant Professor, University of Florida

2:40PM - 3:25PM | PANEL DISCUSSIONS
Room G320, Ground Floor, Reitz Union
Improving STEM Engagement: Research, Education, and Training
Maria Monzon Medina, Professor, Miami Dade College

Room G330, Ground Floor, Reitz Union
FGLSAMP: A Collaboration Opportunity for Broadening Participation
Byron Greene, Florida A&M University
Alicia Batailles, Florida State University
SYMPOSIUM SCHEDULE  
FRI, OCT 22

3:30PM - 4:05PM | MINI PRESENTATIONS

Room G320, Ground Floor Reitz Union

**Summer Undergraduate Research at Florida (SURF) to Increase Diversity at UF**, Mike Nazareth, Director, University of Florida

**A Project-based Learning Improved Health Sciences Student’s Attitude on Research**, Eunkyung Lee, Assistant Professor, University of Central Florida

Room G330, Ground Floor Reitz Union

**Florida Undergraduate Research Journal: Opportunities for Students**, Melodie Eichbauer, Assistant Director, Florida Gulf Coast University

**Where is Research? It’s Everywhere and for Everyone**, Allen Varela, Senior Coordinator of Academic Support Services, Florida International University

4:15PM - 5:00PM | INTERACTIVE PRESENTATIONS

Room G320, Ground Floor, Reitz Union

**Creating Inclusive Opportunities for High Impact Practices: Documenting Student Involvement and Strategically Expanding Programming**, Kimberly Schneider, Assistant Vice Provost, University of Central Florida

Room G330, Ground Floor, Reitz Union

**Understanding Impacts of Undergraduate Research Participation on Student Mental Health**, David Julian, Associate Professor, University of Florida, Ludmila De Faria, Associate Professor, University of Florida; and Casey Lowrey, Senior Fellow Psychiatry, University of Florida
FRI, OCT 22

5:30PM - 6:30PM | POSTER SESSION AND RECEPTION

Keene Faculty Center, Dauer Hall

**FURLS 2021 Update**
Pravalika Manda and Camille Sicangco, Students, CURBS Directors of Special Projects, University of Florida

*Teaching qualitative research skills to help students make sense of their experiential education: a case study from FSU’s Global Scholars program*
B. Warren Oliver, Associate Director, Florida State University

**Using Social Media to Influence Undergraduate Research Culture**
Shelby Smith, Administrative Specialist, Florida Gulf Coast University and Jaclyn Chastain, Coordinator, Scholarly Innovation & Student Research, Florida Gulf Coast University

7:00PM | DINNER ON YOUR OWN

For Suggestions scan the QR code.
We have created a google maps of our favorite Gainesville restaurants. You can also head over to Butler Plaza on Archer Road for family favorites like The Cheesecake Factory and P.F. Changs.
8:30AM-9:00AM | CONTINENTAL BREAKFAST, COFFEE & CONVERSATION

Senate Chamber, Ground Floor, Reitz Union

9:00AM-9:50AM | PLENARY SPEAKER

Senate Chamber, Ground Floor, Reitz Union
José V. Ruiz-Resto

10:00AM-10:50AM | INTERACTIVE PRESENTATIONS

Room G320, Ground Floor, Reitz Union
Undergraduate Research in a Fully Online Engineering Program,
Emily Faulconer, Associate Professor, Embry-Riddle Aeronautical University; Brent Terwilliger, Associate Professor, Embry-Riddle Aeronautical University; and Robert Deters, Associate Professor, Embry-Riddle Aeronautical University

Room G330, Ground Floor, Reitz Union
Creating Transfer STEM Research Communities: A Multi Faceted Approach,
Kimberly Schneider, Assistant Vice Provost, University of Central Florida and Donna Chamely-Wiik, Associate Dean, Florida Atlantic University
SYMPOSIUM SCHEDULE

SAT, OCT 23

11:00AM - 11:50AM | PANEL DISCUSSIONS

Room G320, Ground Floor, Reitz Union

High-impact mentored University-based STEM research for minoritized College Students, Katie Stofer, Research Associate Professor, STEM Education and Outreach, University of Florida; Heidi Lannon, Professor, Santa Fe College; and Corene Matyas, Professor, University of Florida

Room G330, Ground Floor, Reitz Union

Successful Implementation of a Campus Wide CURE Initiative
Jennifer Drew, Senior Lecturer, University of Florida; Christine Miller, Associate Professor, University of Florida; Timothy Murtha, Professor, University of Florida; and Craig Smith, University of Florida

12:00PM-12:40P | BOX LUNCH

Senate Chamber, Ground Floor, Reitz Union

12:45PM-1:30PM | INTERACTIVE PRESENTATIONS

Room G320, Ground Floor, Reitz Union

Developing and Implementing an Undergraduate Research Certificate, Donna Chamely-Wiik, Associate Dean, Florida Atlantic University; Jennie Soberon, Associate Director, Florida Atlantic University; and Lauren Melanson, OURI Program Coordinator, Florida Atlantic University
12:45PM-1:30PM | INTERACTIVE PRESENTATIONS, CONT.

Room G330, Ground Floor, Reitz Union

**Research-embedded undergraduate course series in a teacher preparation program**, Tunde Szecsi, Professor, Florida Gulf Coast University; Debra Giambo, Professor, Florida Gulf Coast University; and Charles (billy) Gunnels, Director Scholarly Innovation & Student Research, Florida Gulf Coast University

1:40PM-2:40PM | MINI PRESENTATIONS

Room G320, Ground Floor Reitz Union

**Scaffolding Research Engagement: Models to Support Transfer Students through NSF S-STEM**, Kimberly Schneider, Assistant Vice Provost, University of Central Florida and Ian Biazzo, Graduate Teaching Assistant, University of Central Florida

**Understanding Societal Issues Through a Scholarly-Focused Campus Newsletter**, Santiago Luaces, Coordinator, Scholarly Innovation & Student Research, Florida Gulf Coast University and Jaclyn Chastain, Florida Gulf Coast University

**Integrating Humanities and Creative Arts Research into Research Programming**, David Advent, Assistant Director, Florida State University

**Too Tedious for Teaching? An Assessment of Research Synthesis Activities on Undergraduate Learning**, Nicholas Gengler, University of Florida
1:40PM-2:40PM | MINI PRESENTATIONS, CONT.

Room G330, Ground Floor Reitz Union

The Intersection between Research and Real Life: INTRO Research Courses as High Impact Practices, Mary Tripp, Instructional Specialist, University of Central Florida and Darya Farsinejad, Academic Program Coordinator, University of Central Florida

Worms provide an inclusive and equitable virtual C.U.R.E., Michelle Osovitz, Assistant Professor, University of Tampa, and Teagan McMahon, Assistant Professor, Connecticut College

Research Projects in Data-Enabled Industrial Mathematics: from a course to NSF REU site, Mihhail Berezovski, Associate Professor, Embry-Riddle Aeronautical University

2:45PM-3:30PM | INTERACTIVE PRESENTATIONS

Room G320, Ground Floor, Reitz Union

Ten Years In: Supporting Students across Campus through the Undergraduate Research Opportunity Program, Latika Young Director, Center for Undergraduate Research and Academic, Florida State University; Alicia Batailles, Senior Associate Director, Florida State University; and Yanira Campos, Graduate Assistant, Florida State University
2:45PM-3:30PM | INTERACTIVE PRESENTATIONS, CONT

Room G330, Ground Floor, Reitz Union

*Collaborative Research Experience: An Approach to Student-Driven Course-Based Undergraduate Research*, Jacob Watson, Undergraduate Research Coordinator, University of Florida

3:30PM-4:00PM | CLOSING

Senate Chamber, Ground Floor, Reitz Union

Anne Donnelly, Center for Undergraduate Research, Director, University of Florida
Improving STEM Engagement: Research, Education, and Training
Maria Monzon Medina (Miami Dade College)

Undergraduate Research: Nuts & Bolts
In this presentation we discuss our efforts and success at engaging underrepresented minority students in STEM. Miami Dade College (MDC) is a Hispanic Serving Institution, with almost 65,000 students each year. With the support of the DOE, STEM-AISLE and STEM-SPACE projects provided the platform to implement high impact practices to integrate education that enriched student experience, enhanced student confidence, and soft skills. Students are offered with multiple STEM activities each month, have a deeper exposure to all STEM disciplines and gain professional training beyond regular coursework. The Vaping, Diabetes, and Neuroscience projects, as part of the undergraduate research, immersed the students in the process of research and the scientific method which sharpens critical thinking, promotes collaborative working, communication, discussion and problem solving skills. In summary, here we describe the results that directly impact students such as acquiring skills for independent and life-long learning, developing professional values, standards and practices for the responsible conduct of research, and beginning the process of networking and integration into a community of experts in their field.

FGLSAMP: A Collaboration Opportunity for Broadening Participation
Byron Greene (Florida A&M University)
Alician Batailles (Florida State University)
Undergraduate Research: Nuts & Bolts
Developing Researchers through Innovations I Virtual Environments (DRIVE), the Florida-Georgia Louis Stokes Alliance for Minority Participation (FGLSAMP), seeks to increase STEM undergraduate enrollment and degree production in addition to STEM broadening participation research and learning activities. The project will investigate non-cognitive attributes that contribute to persistence and degree completion status for populations historically underrepresented in STEM disciplines. The project has a focus upon creating avenues for students to engage in STEM research and learning engagement through transdisciplinary and translation experiences.
Summer Undergraduate Research at Florida (SURF) to Increase Diversity at UF
Mike Nazareth (University of Florida)

Campus Highlights

A Project-based Learning Improved Health Sciences Student’s Attitude on Research
Eunkyung Lee (University of Central Florida)

Diversity & Inclusion

I teach ‘Epidemiology of Chronic Diseases’ (~150 students per semester) to upper-division undergraduates. Due to the large size of the class, exams and quizzes with multiple choice questions are often used to evaluate student’s learning, but it is hard to satisfy student’s curiosity and self-directed learning. I adapted a semester-long project that requires students to (1) analyze a correlation of their selected disease and a modifiable risk factor using data from the Florida Department of Health and (2) compare their results with three journal articles related to their topic.

According to the survey conducted in Spring 2021 (n=155), about 80% of students agreed that research is vital in their career, but more than 65% of students reported that research is difficult, complicated, or makes them anxious or nervous at the first week. The same survey conducted the last week showed that significantly fewer students reported that research made them anxious, scared, or nervous and that research was complicated, stressful, and difficult, while more students responded that they enjoyed, liked, and loved research and that research was interesting and pleasant.

Recognizing that students often struggle with writing and providing various resources (including a detailed step-by-step guideline along with a template and a sample paper, anonymous online peer-review, and assistance from a peer coach) is essential to impact students through a class project positively. The resources I provide for students and results from the statistical analysis will be presented.
Florida Undergraduate Research Journal: Opportunities for Students
Melodie Eichbauer (Florida Gulf Coast University)

*Undergraduate Research: Nuts & Bolts*

This presentation will highlight the Florida Undergraduate Research Journal (FURJ), which is a new publication opportunity for students to share their work with others beyond their campus journals, and the opportunities for students. Serving as a member of the Student Editorial Board provides students opportunities to participate in mentorship and professionalization. They will participate in monthly board meetings on Zoom, review submissions to see if they are appropriate for disciplinary review, arrange for faculty or graduate students to conduct a disciplinary review, and create an image for the volumes cover. Publication opportunities offer students the experience of what goes into disseminating their work in print. Throughout the publication process, student-authors will receive constructive feedback and comments at each stage of the process to foster their research and writing skills as submissions will undergo a tiered review process that assesses the focus of the question, the content, the methodology, and the audience; followed then by a review of the content by those dedicated and committed to high-quality student research. This presentation will present what each opportunity entails so participants can communicate them across their respective campus. It also will provide an update on the progress of the first volume, which is scheduled for publication during FURC 2022.

Where is Research? It’s Everywhere and for Everyone.
Allen Varela (Florida International University)

*Undergraduate Research: Nuts & Bolts*

The Honors College at Florida International University has a very successful undergraduate research program, Advanced Research and Creativity in Honors. The program has been popular with students, providing opportunities for research, mentorship, and dissemination at, e.g., the URFIU Conference (Undergraduate Research at FIU). Recently, we introduced new tracks in the ARCH program opening more opportunities for Honors students to conduct research in all disciplines. Feedback from FIU students indicated that they assumed research was only in STEM disciplines. In response to this feedback, we participate in more on-campus events about undergraduate research where undergraduate researchers, alumni with research experience and faculty discuss their experiences to FIU students. The conference participation has grown steadily over the past several years, and both URFIU and ARCH are well known. Looking forward, we would like to increase participation by allowing non-Honors undergraduates at FIU to participate. One way to incentivize students is through the use of micro-credentialing or badging for research. FIU is piloting research badging, with three different areas targeted (preparation, conducting research and disseminating results) with separate badges.
Creating Transfer STEM Research Communities: A Multi Faceted Approach
Kimberly Schneider (University of Central Florida)

Diversity & Inclusion

There remains a national need to support students as they transition from community college into a four-year institution, many of whom are from underrepresented populations. This interactive presentation describes a collaboration between three universities to create a sustainable STEM retention program through the implementation of a formal research learning community. The pillars of this transfer student learning community include: academics and research, mentoring, and community, which have been adapted from a freshmen living-learning community model to meet the needs of a transfer student population. Data from focus groups and alumni surveys, along with persistence, graduation, and critical thinking skill development data, highlight factors that have led to the success of the program and illustrate the importance of transfer student engagement in research.

Understanding Impacts of Undergraduate Research Participation on Student Mental Health
David Julian and Ludmila De Faria (University of Florida)

Diversity & Inclusion

There is an on-going mental health crisis on college campuses, with the 2021 Healthy Minds Study of college students nationwide indicating, among other challenges, a high prevalence of moderate or major depression (41%) and anxiety disorder (34%), complicated by almost half of students perceiving a public stigma against receiving mental health treatment. This is likely to be exacerbated among students who are from underrepresented racial/ethnic groups, LGBTQ+, first-generation in college, and/or from low-income backgrounds. Participation in research provides many benefits to undergraduate students, including improved critical thinking and student learning, increased persistence in college, and shorter time to degree. However, little is known about potential effects of undergraduate research on student mental health, with evidence indicating it may increase stress and anxiety for some students. The University of Florida’s two NIH-supported undergraduate training programs, SF2UF and MARC GatorSTAR, together with the UF Department of Psychiatry have initiated a new collaboration to study and address impacts of undergraduate research on student mental health. Our approaches include administration of at-risk screening surveys and biweekly Mental Health & Wellness Process Groups that are facilitated by a senior medical resident in psychiatry who is supervised by a board-certified psychiatrist. In this interactive presentation, we will discuss factors that may affect depression and anxiety among students participating in research and evidence-based strategies to improve awareness of and access to mental health and wellness services.
FURLS 2021 Update
Pravalika Manda and Camille Sicangco (University of Florida)
Undergraduate Research: Nuts & Bolts
The Center for Undergraduate Research Board of Students will give an update to the success of the virtual 2021 FURLS event that occurred in the beginning of the year. The 2022 in-person event will also be discussed.

Teaching qualitative research skills to help students make sense of their experiential education: a case study from FSU’s Global Scholars program
Oliver B. Warren (Florida State University)
Undergraduate Research: Nuts & Bolts
Florida State University’s Global Scholars program is a three-semester program intent on teaching qualitative research skills, predominately ethnographic and narrative methods, as well as the ethics and impacts of development projects to enable undergraduate students to explore an interest in a community-based issue during a self-designed summer experience. In particular, the use of qualitative research methods teaches students to observe the environment around, understand the cultural significance of, and discern their experience with a particular community-based issue. The program has evolved through several iterations—from exclusively international to the current domestic and international opportunities—though the emphasis on qualitative methods has remained as a constant throughout. This presentation explores how teaching qualitative research methods can play a critical role in helping students make sense of their experiential educational opportunities while practicing their research skills “in the field”. In particular, this presentation highlights students’ use of qualitative methods within their capstone projects.
Using Social Media to Influence Undergraduate Research Culture

Shelby Smith (Florida Gulf Coast University)
Jaclyn Chastain (Florida Gulf Coast University)

Campus Program Highlights

Typically, students attending a Primarily Undergraduate Institution (PUI) are not aware of the value and benefits that are associated with research and scholarly work. This is especially true of students from historically-excluded populations or those who are first generation. These benefits can often be difficult to communicate to students and engage them in research opportunities. Social media is a valuable tool to engage students and foster a campus culture for undergraduate research. The Office of Scholarly Innovation & Student Research highlights and celebrates a diverse array of scholars through various social media outlets. By focusing on students, faculty, and alumni, the FGCU campus and community visualize research experiences with individuals from every discipline. This poster presentation will share the strategies used for various social networks as well as the campaigns created to influence FGCU’s undergraduate research culture.
**Undergraduate Research in a Fully Online Engineering Program**
Emily Faulconer (Embry-Riddle Aeronautical University), Brent Terwilliger (Embry-Riddle Aeronautical University), and Robert Deters (Embry-Riddle Aeronautical University)

*Undergraduate Research: Nuts & Bolts*

Many traditional engineering programs offer undergraduate research opportunities, with varying levels of support. Due to access limitations, distance students are likely underrepresented in undergraduate research. In a project funded through the NSF’s I-USE program, we designed a pilot program for B.S. Engineering Technology students completing their degrees fully online. The pilot utilizes existing and new institutional frameworks, with scaffolding to support early experiences, a bridge to research, undergraduate research, and a culminating experience. Here, we present the structure of the supports and discuss challenges faced along the way.

**Creating Transfer STEM Research Communities: A Multi Faceted Approach**
Kimberly Schneider (University of Central Florida) and Donna Chamely-Wiik (Florida Atlantic University)

*Diversity & Inclusion*

There remains a national need to support students as they transition from community college into a four-year institution, many of whom are from underrepresented populations. This interactive presentation describes a collaboration between three universities to create a sustainable STEM retention program through the implementation of a formal research learning community. The pillars of this transfer student learning community include: academics and research, mentoring, and community, which have been adapted from a freshmen living-learning community model to meet the needs of a transfer student population. Data from focus groups and alumni surveys, along with persistence, graduation, and critical thinking skill development data, highlight factors that have led to the success of the program and illustrate the importance of transfer student engagement in research.
High-impact mentored University-based STEM research for minoritized College Students
Kathryn Stofer (University of Florida), Heidi Lannon (Santa Fe College), and Corene Matyas (University of Florida)

Diversity & Inclusion

High-impact practices such as mentoring and undergraduate research experiences increase recruitment and retention of minoritized students in STEM at 4YUs. We know less about the impact of these practices on students at CCs, where the STEM pathway has become a main postsecondary school entry point due to affordability, flexibility, and academic support. Close collaborations between CCs and 4YUs leverage complementary opportunities, supporting vertical transfer. We present a case study of a year-long program offered as a collaboration among a CC, a 4YU, and a non-profit science center. Students were to spend at least five hours weekly on research and present their results in December. Eleven of 20 students completed the research component; including 10 from minoritized gender, racial, and other groups; and eight who transferred to a 4YU science major. Student exit interviews indicated that they valued the research experience. Faculty reflections suggest research was most successful when students worked together on a project designed for them and met regularly, in-person with their mentors. However, students cited challenges in commuting to the 4YU due to jobs and personal conflicts. Mentor-student matching produced mixed success. Multi-institutional coordination, communication, and program flexibility proved challenging. We provide recommendations both that we incorporated and that we suggest for future programs, namely: incorporating a mini internship with each mentor into a spring course, then allowing students to select the project they wish to pursue; and all mentors should undertake training together to better understand the mindsets of two-year college students and effectively accommodate individual needs.
Successful Implementation of a Campus Wide CURE Initiative

Jennifer Drew, Senior Lecturer, University of Florida, Christine Miller, Associate Professor, University of Florida, Timothy Murtha, Professor, University of Florida, and Craig Smith, University of Florida

Undergraduate Research: Nuts & Bolts

Three years ago the UF Center for Undergraduate Research had the opportunity to develop a suite of CURE classes targeted to a group of second semester first year students of all disciplines, CURE@UF. The program to date has helped develop 26 classes in 11 different departments. In the past three years, this project enrolled 539 students who gained research experience in their first year as part of their curriculum. It is unlikely that this many first-year students would have been able to secure a mentored one-on-one research experience.

The ROLE Survey, developed by David Lopatto, Grinnell College, was used to measure participants’ self-reported gains in 26 areas such as ability to acquire and analyze data, self-confidence, ability to collaborate with others, and gains in written and oral communication skills. The key to the successful roll out of this many classes in different colleges was the flexibility given to faculty to develop a course within the constraints of their specific space/department/college limitations. While maintaining the basic CURE core definition of the class consisting of 75-80% research, faculty were given latitude to set course caps and course formats. A panel of these faculty representing these different models will describe their course and outcomes. The Role survey results will be shared as well as a CNVAS CURE resource that is publicly available.
Developing and Implementing an Undergraduate Research Certificate
Donna Chamely-Wiik (Florida Atlantic University), Jennie Soberon (Florida Atlantic University), and Lauren Melanson (Florida Atlantic University)

Undergraduate Research: Nuts & Bolts

Florida Atlantic University (FAU) recently developed and implemented (Fall 2021) a university-wide Undergraduate Research Certificate. This 12-credit certificate program recognizes undergraduate students for systematic development of excellence in undergraduate research. The Undergraduate Research Certificate was established from our previous efforts of certifying courses for Research Intensive (RI) designation at FAU. The certificate criteria includes completion of 12-credits of research enriched coursework (Exposure, Skill building and Intensive) and a research presentation (Dissemination). Presenters will discuss the benefits of an undergraduate research certificate for students, process for establishing the certificate, criteria and student eligibility, and the mechanism utilized for tracking/certifying the dissemination presentation criteria.

Research-embedded undergraduate course series in a teacher preparation program
Tunde Szecsi (Florida Gulf Coast University), Debra Giambo (Florida Gulf Coast University), and Charles (Billy) Gunnels (Florida Gulf Coast University)

Undergraduate Research: Nuts & Bolts
This presentation will describe an initiative in which undergraduate teacher candidates took a three-course sequence of CUREs (research-embedded courses) focused on teaching English for Speakers of Other Languages (ESOL) and report on teacher candidates’ learning outcomes in these courses. Teacher candidates explored and learned the course content through conducting empirical research, which addressed diversity and social justice related to English learners. To understand the impact of this research-embedded series, we analyzed teacher candidates’ final research projects and their reflections on the knowledge related to the ESOL that they gained in these courses. The study also examined the development of transferable skills (critical thinking, informational literacy, and written communication) between students that complete this three-course CURE with students that took comparable courses that did not include a research component. The impact of the courses indicated that students demonstrated higher performance on critical thinking, informational literacy, and written communication than students who were enrolled in regular sections of the courses. In addition, teacher candidates’ reflection showed increased self-confidence in conducting research and interpreting research data. Additionally, teacher candidates noted that they gained a better understanding about social justice issues.
Scaffolding Research Engagement: Models to Support Transfer Students through NSF S-STEM

Kimberly Schneider (University of Central Florida) and Ian Biazzo (University of Central Florida)

Diversity & Inclusion

There are many barriers to student involvement in academic research. This is especially true for students who attend two-year institutions, both while at the two-year institution and after transfer to a four-year institution. In this session, we will present two S-STEM programs from Valencia State College (a two-year institution) and the University of Central Florida (UCF; Research I Institution). Both central Florida programs have strong components of scaffolded research engagement. Valencia graduates often transfer into UCF, resulting in synergy between the two institutions. VECTOR (Valencia Engaging for Completion Through Opportunities in Research) invites students to pursue their AA and provides early exposure to research through research methods courses followed by several options to engage in research during their last semester. When the VECTOR students transition to UCF, they participate as a group in the UCF Summer Research Academy (SRA). UCF TRIP (Transfer student Research and Integration Program) invites life science transfer students to join a two-year research community. Students take an introduction to research course in their first semester and complete an intense academic research course in their second semester. In year two, they organize their results and present their work at regional or national conferences. Students receive mentorship and professional development throughout the program. This session will share the program models and how the programs have evolved in their first years, especially in light of COVID-19.

Understanding Societal Issues Through a Scholarly-Focused Campus Newsletter

Santiago Luaces (Florida Gulf Coast University) and Jaclyn Chastain (Florida Gulf Coast University)

Diversity & Inclusion

For years, our office had produced a weekly newsletter that shared scholarly events and opportunities to undergraduate research students. The newsletter was reframed in May 2020 as a response to the tragic deaths of George Floyd and Breonna Taylor, as well as the rise of the Black Lives Matter movement. The FGCUScholarly Newsletter now informs readers about societal topics (e.g., systemic racism & climate change) and annual celebrations (e.g., Pride & Indigenous Heritage month) through a scholarly lens by highlighting relevant work done by FGCU faculty, students, and alumni. The result is a publication that seeks to educate and engage students in topics they care about through the scholarly work and research being conducted on our campus. This reimagining of the newsletter has resulted in an 80% increase in readership.
Integrating Humanities and Creative Arts Research into Research Programming
David Advent (Florida State University)

Undergraduate Research: Nuts & Bolts; Diversity & Inclusion

While gaining critical attention, the reach of humanities and creative arts research to undergraduate students is lacking in comparison to STEM and social sciences-based research. Part of the mission of many OURs is to increase this representation through thoughtful inclusion into research programming, providing a space for the creative arts, and more. In this presentation, I will cover why it’s important to include the humanities and creative arts in our language and conversations concerning undergraduate research and how impactful that research can be for all undergraduate students. My presentation will cover my experience in working with students engaged in humanities and creative arts research, how our office (the Center for Undergraduate Research and Academic Engagement (CRE)) is continuing to support our humanities researchers, and my own personal experience conducting English Literature research during my undergraduate and MA career. Areas of support for our humanities and creative arts students at our office include giving those students an opportunity to present their research—in all forms—at our President’s Showcase of Undergraduate Research Excellence, our Undergraduate Research Symposium, and providing funding for all our students to present their research at discipline-specific conferences. In keeping with the theme of FSS, this presentation will also touch on various intersections of undergraduate research: interdisciplinary research, combining research and personal identities, and more.
Too Tedious for Teaching? An Assessment of Research Synthesis Activities on Undergraduate Learning.
Nicholas Gengler (University of Florida)

Undergraduate Research: Nuts & Bolts

Extensive research exists detailing the benefits of field experiences and self-directed research on undergraduates in STEM fields. Undergraduates that participate in these experiences are more likely to succeed academically, apply to graduate school, and have increased confidence. These experiences are often popular due to their hands-on approach, while other experiences like quantitative analysis or research synthesis are often less popular. Research synthesis is a critical component of the scientific process and a necessary skill for any researcher. Despite its importance, there is little evidence to indicate how undergraduates benefit from or respond to research synthesis experiences.

Due to its tedious nature, undergraduate students might respond to research synthesis differently than to field or self-directed research experiences. Do undergraduate students benefit from research synthesis experiences? To answer this question, we assessed the perspectives of nine University of Florida undergraduate volunteers who participated in an ecological research project during the Spring 2021 semester. The students’ tasks primarily entailed systematic synthesis of all research related to the movement behavior of 128 species of wildlife. The undergraduate volunteers answered surveys quantifying their interest in STEM, self-confidence as researchers, and their reaction to the experience before and after participating in the project. Their responses were consistently positive and showed that their self-confidence significantly improved proportionally to their level of involvement with the research synthesis activities. Our results suggest that research synthesis experiences also have a positive effect on undergraduates and are another valuable tool for preparing undergraduate students, especially in STEM fields.
The Intersection between Research and Real Life: INTRO Research Courses as High Impact Practices
Mary Tripp (University of Central Florida) and Darya Farsinejad (University of Central Florida)

Undergraduate Research: Nuts & Bolts
Speaker 1 will discuss the history and implementation of a new academic course that introduces students to research at the university. The overview will include how the course was initially developed and funded; how instructors were proposed, funded, and hired, and how the course syllabus has evolved over the semesters. This speaker will give an overview of the course syllabus, including content and focus.
Speaker 2 will go through the nuts and bolts of implementing this course. This will include how the course is marketed, how students apply for the course, how often the course is offered, enrollment numbers, course satisfaction surveys, pipelines into research experiences, and typical questions students have before taking the course.
Speaker 1 will discuss the newest development in delivering the course – creating coherent assignments and syllabus that was reviewed by a faculty panel for an IE (Integrative Experience) High Impact Practice course designation. The newly redesigned course adds assignments that get students thinking about the real-life applications of research for their careers.

Worms provide an inclusive and equitable virtual C.U.R.E.
Michelle Osovitz (University of Tampa) and Taegan McMahon (Connecticut College)

Undergraduate Research: Nuts & Bolts
During the pandemic arose a need for virtual lab activities that were easy, cheap, inclusive and fun. In the Spring of 2021, I developed a collaboration between my Developmental Biology Course students and a parasitology professor to generate a virtual Course-Based Undergraduate Research Experience (C.U.R.E.). Over the last 3 weeks of the semester, we investigated the effect of Chytrid fungal metabolites on Planaria behavior and regeneration. We developed and implemented an experimental protocol that allowed students to conduct the entire experiment using minimal lab consumable materials, easily maintained freshwater Planaria, cell phones for image and video collection and open access ImageJ data analysis. The project methods do not use any expensive laboratory equipment, which increases equity and information access in the sciences. I will share the results of this virtual C.U.R.E. with a focus on implementation from lab to home, successes and areas for improvement, and the future of this project as it continues to produce a student generated publication-quality data set. The goal of this presentation will be to increase dialog and create new collaborations focused around high impact practice research opportunities that are inclusive and increase equity for students outside the traditional laboratory setting.
1:40PM - 2:40PM | MINI PRESENTATIONS

Using Canvas to Manage Research Programs and Create Community
Jennifer Moses (University of Florida)

Undergraduate Research: Nuts & Bolts
Canvas is a learning management system used widely by universities as a way to provide coursework online. The University of Florida has recently adapted Canvas as a requirement for all courses in-person or online. As a way to reach students in a capacity they are comfortable, the Center for Undergraduate Research (CUR) at UF uses Canvas to manage student scholarship programs and provide transparency, resources, and communication on student requirements. In addition to these resources, this method allows for CUR to create a sense of community among the students by providing areas for discussion and engagement. In this presentation, we will discuss the setup and ways to maximize student resources and engagement while providing a sense of community among the students in these programs.

Research Projects in Data-Enabled Industrial Mathematics: from a course to NSF REU site
Mihhail Berezovski (Embry-Riddle Aeronautical University)

Undergraduate Research: Nuts & Bolts; Diversity & Inclusion
In this talk, we will discuss development from a course to nationwide NSF REU site at Embry-Riddle Aeronautical University. We will review challenges of bringing collaboration with real business, industry, or government (BIG) into the undergraduate research. We highlight differences and challenges compared to traditional undergraduate research. We will discuss the possible ways to respond to COVID19 situation and share ideas for successfully designing and mentoring such projects.
Abstracts

FSU launched its Undergraduate Research Opportunity Program in 2012. Targeted towards first-, second-year, and transfer students, UROP aims to make undergraduate research accessible to students’ early in their university careers. Currently serving 500 students mentored by approximately 250 Faculty/Post Doc/Grad Student/Campus and Community Research Mentors along with 60 UROP Leaders (upperlevel students trained to facilitate the UROP colloquia), UROP students complete a yearlong UROP colloquia, work as research assistants for 5-10 hours per week, and present their research contributions at the campus-wide Undergraduate Research Symposium in spring. This presentation evaluates UROP’s success at the ten-year mark in attaining its accessibility goals, specifically examining the participation rates of various typically underrepresented student populations, including transfer, first generation in college, Pell Grant eligible, racially minoritized, and Veteran students, as well as those disciplines that have historically been underrepresented in undergraduate research (e.g., creative arts, business, education). The presentation also highlights some of the gaps in inclusivity and equity that remain in the program— including the gap between the diversity of the UROP student population and the UROP Leaders who mentor them—and some of the practices we are developing and implementing to ensure the program meets our goals of equity at all levels (which include overhauling our UROP Leader selection process, the introduction of implicit bias training, and the creation of “pods” for students to further support each other, among others). The format provides ample opportunities for audience participation and sharing of best practices/challenges on their own campuses.

2:45PM-3:30PM | INTERACTIVE PRESENTATIONS

Ten Years In: Supporting Students across Campus through the Undergraduate Research Opportunity Program
Latika Young (Florida State University), Alicia Batailles (Florida State University), and Yanira Campos (Florida State University)

Diversity & Inclusion

FSU launched its Undergraduate Research Opportunity Program in 2012. Targeted towards first-, second-year, and transfer students, UROP aims to make undergraduate research accessible to students’ early in their university careers. Currently serving 500 students mentored by approximately 250 Faculty/Post Doc/Grad Student/Campus and Community Research Mentors along with 60 UROP Leaders (upperlevel students trained to facilitate the UROP colloquia), UROP students complete a yearlong UROP colloquia, work as research assistants for 5-10 hours per week, and present their research contributions at the campus-wide Undergraduate Research Symposium in spring. This presentation evaluates UROP’s success at the ten-year mark in attaining its accessibility goals, specifically examining the participation rates of various typically underrepresented student populations, including transfer, first generation in college, Pell Grant eligible, racially minoritized, and Veteran students, as well as those disciplines that have historically been underrepresented in undergraduate research (e.g., creative arts, business, education). The presentation also highlights some of the gaps in inclusivity and equity that remain in the program— including the gap between the diversity of the UROP student population and the UROP Leaders who mentor them—and some of the practices we are developing and implementing to ensure the program meets our goals of equity at all levels (which include overhauling our UROP Leader selection process, the introduction of implicit bias training, and the creation of “pods” for students to further support each other, among others). The format provides ample opportunities for audience participation and sharing of best practices/challenges on their own campuses.
In Spring of 2021, I piloted a course titled Collaborative Research Experience for UF’s College of Liberal Arts and Sciences Beyond120 Program. Drawing upon the CURE course model as inspiration, the intention was to provide a student-led, project-based course for majors within our college that would emphasize interdisciplinarity, intensive reflection on the research process, and transferable skill acquisition. The course structure revolved around a collaborative “workshop” model designed to remove barriers to research participation by creating opportunities for students of diverse experiences levels and talents to make impactful contributions to the project in different ways. Out of the initial group of 14 students, 5 elected to continue the class research project over the 2021 Summer B session independently for directed research credit, resulting in an article that is being submitted for review to the journal of Discourse & Communication.

For this presentation, I propose to discuss the pedagogical goals and questions I had in creating this course, the course model and structure, and initial outcomes. In shifting to a more student-driven research course model, I hoped to give students a greater opportunity to develop transferable skills such as resilience, self-directedness, and critical thinking. Students in the pilot group were highly engaged, undertook elective projects not required for the course grade (including a public group presentation for National Research Week), and reported that participating in this type of course helped them overcome feelings of disconnectedness during the pandemic.
Parking is reserved at the Reitz Union Parking Garage. Use coupon code UFCUR2021 at any of the pay stations in the garage. A student volunteer will be there to assist with directions.

**University of Florida Welcome Center**
737 Reitz Union Drive, Gainesville, FL 32611
The Center for Undergraduate Research would like to thank Provost Dr. Joe Glover for his long standing support of UF undergraduate research. Additionally, we would like to thank Associate Provost for Undergraduate Affairs Dr. Angela Lindner for her commitment to undergraduate students and unwavering support of the Center's efforts.