



**Board of Trustees
Educational Programs Committee
May 3, 2016, 1:30 p.m. – 3:30 p.m.
President's Boardroom, Millican Hall, 3rd floor
Conference call-in phone #800-442-5794, passcode 463796**

AGENDA

- | | |
|--|---|
| I. CALL TO ORDER | Robert Garvy
Chair, Educational Programs Committee |
| II. ROLL CALL | Susan Tracy
Senior Administrative Assistant |
| III. NEW BUSINESS | Chair Garvy |
| <ul style="list-style-type: none">• General Education Program (INFO-1) | Elizabeth Dooley
Dean of the College of Undergraduate
Studies and Vice Provost for
Teaching and Learning |
| V. OTHER BUSINESS | |

ITEM: INFO-1

EDUCATIONAL PROGRAMS COMMITTEE
University of Central Florida

SUBJECT: General Education Program

DATE: May 3, 2016

For information only.

Supporting documentation: Attachment A: General Education Undergraduate Experience
Attachment B: General Education Program (GEP) Courses
Attachment C: 2014-15 GEP Courses
Attachment D: Stylus
Attachment E: Showcase of Undergraduate Research Excellence
Attachment F: What's Next

Prepared by: Elizabeth Dooley, Dean of the College of Undergraduate Studies and Vice Provost for Teaching and Learning

Submitted by: A. Dale Whittaker, Provost and Executive Vice President

Attachment A



General Education Undergraduate Experience

Board of Trustees
Educational Programs Committee
General Education Program Workshop
May 3, 2016



Participants

- **Michael Aldarondo-Jeffries**, Director, Academic Advancement Programs
- **Paige Borden, Ph.D**, Assistant Vice President, Institutional Knowledge Management
- **Chris Clemente**, 2015-16 President, Student Government Association
- **Amy Darty**, Associate Instructor, Online Specialist, GEP Coordinator and GEP Assessment Department of History
- **Elizabeth A. Dooley, Ed.D**, Vice Provost for Teaching and Learning, Dean of the College of Undergraduate Studies
- **Lynn Hepner**, Associate Dean, College of Arts and Humanities
- **Patrice Lancey, Ph.D**, Assistant Vice President, Operational Excellence and Assessment Support
- **Heath Martin, Ph.D**, Interim Associate Dean, College of Undergraduate Studies
- **Kimberly Schneider, Ph.D**, Interim Assistant Dean, College of Undergraduate Studies; Director, Undergraduate Research
- **Stephanie Vie, Ph.D**, Associate Professor and Interim Chair, Department of Writing and Rhetoric
- **Caitlyn Zona**, 2014-15 President, Student Government Association

Preparing Students for Success After College

"One cannot live by equations alone. The need is increasing for workers with greater foreign language skills and an expanded knowledge of economics, history and geography. And who wants a technology-driven economy when those who drive it are not grounded in such fields as ethics?"

—Norman Augustine, former Chairman and CEO of the Lockheed Martin Corporation, 2013

In a 2015 national survey of business and non-profit employers:

- **91 percent** stated that a demonstrated ability to think critically, communicate clearly, and solve complex problems is more important to career success than a candidate's undergraduate major.*
- **96 percent** agree that all college students should have experiences that teach them how to solve problems with people whose views are different from their own.*

*Hart Research Associates. 2015. *Falling Short? College Learning and Career Success*. Washington, DC: Association of American Colleges and Universities.



Why GEP Is More Than a Requirement
Video Testimonial by Komysha Hassan

General Education Requirements

For the 2015-16 academic year, undergraduate students complete a curriculum that includes legislative and university requirements.

The University of Central Florida requires 120 credits to graduate comprised of:

- Florida Statue and Board of Governors legislative requirements:
 - One course in each of the following five General Education Foundations, for a total of 15 credit hours:
 - English composition
 - humanities
 - mathematics
 - natural sciences
 - social sciences
 - 18 credit hours of Gordon Rule requirements:
 - four writing courses totaling 12 credit hours
 - two math courses totaling six credit hours
- UCF General Education Program courses totaling 21 credit hours.



Expected Outcomes

A strong general education prepares students to understand and manage complexity, diversity, and change.*

- gain broad knowledge (e.g., of science, culture and communication) and in-depth understanding of a specific area and can apply them in real-world settings
- develop transferrable intellectual and practical skills, including communication, inquiry and analysis, critical thinking, quantitative literacy, and problem-solving
- understand personal, civic, and social responsibilities as a result of integrative and applied learning experiences
- possess a foundation for life-long learning

*The LEAP Challenge: Education for a World of Unscripted Problems. Washington, DC: Association of American Colleges and Universities.

Communication (nine credit hours)

- demonstrate the ability to analyze the situational characteristics of a communication act: audience, purpose, and source, and author.
- demonstrate the ability to understand communication and speaking skills
- demonstrate the ability to write in a clear, logical, and appropriate manner
- demonstrate the ability to research academic topics and present the synthesis of that research:
 - in speech with appropriate citations
 - in texts with correct documentation
- demonstrate an awareness of diversity in American society.

Cultural and Historical (nine credit hours)

- gather, synthesize, and analyze information from appropriate resources and be able to critically evaluate information and sources for accuracy and credibility
- identify and deepen appreciation of common human themes and the richness of diverse cultures
- analyze and discuss the meaning of an artwork, performance, or text in diverse aesthetic, historical, and cultural contexts.
- demonstrate knowledge and critical thinking of the concepts, styles, aesthetic, theoretical, and critical principals in an art
- demonstrate knowledge of the chronology and significance of major events and movements in western civilization, U.S. history, or world civilization

Mathematical (six credit hours)

- demonstrate the skills needed to solve real-world quantitative problems including choosing the proper technique or technology when appropriate
- demonstrate qualitative understanding of mathematical, statistical, and computing concepts
- demonstrate essential computing skills common to academic degrees and their related professions, and in particular, skills relating to professional use of computers and application software

Social (six credit hours)

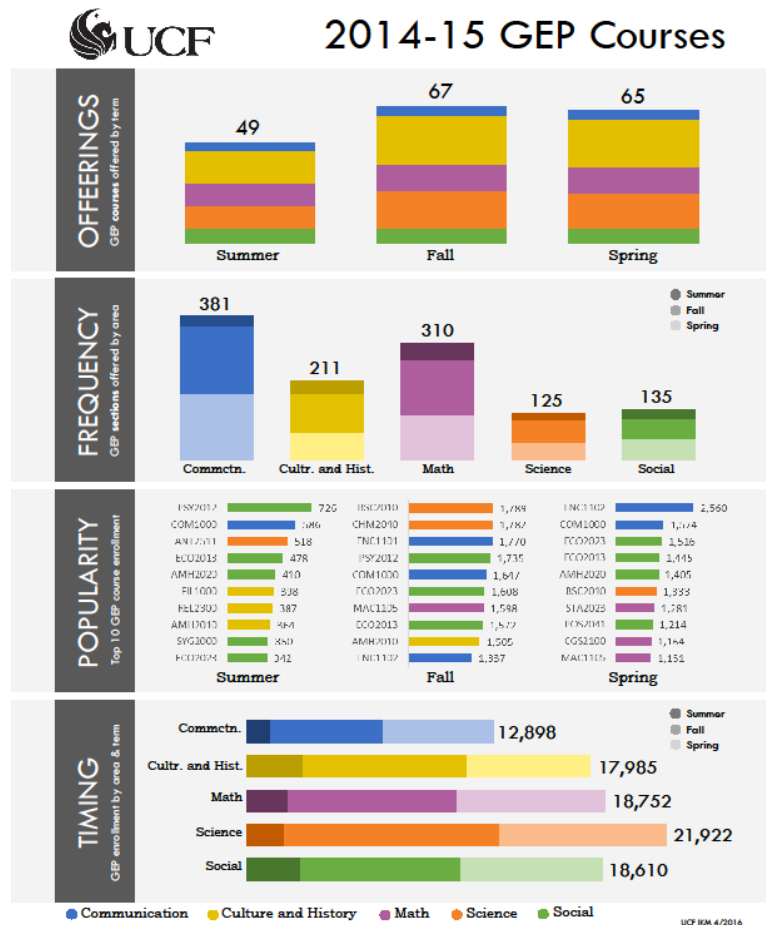
- gather and synthesize information from appropriate resources, and be able to evaluate information and sources for accuracy and credibility
- understand how an individual's place in the world is affected by social, economic, and political institutions
- gain a deeper appreciation of one's role and potential impact in social, economic, and political institutions
- demonstrate an understanding of the interaction among social, economic, and political structures and functions
- understand how individuals behave and interact with other individuals in their psychological, political, economic, and social environments.

Science (six credit hours)

- demonstrate an understanding of science as an empirical attempt to acquire information about the real world, develop possible explanations of these phenomena, and test the explanations by predicting the outcome of future observations
- demonstrate an ability to assess the extent to which claims presented as "scientific" satisfy the empirical character of scientific explanations
- demonstrate understanding of scientific knowledge and problem solving in a physical or life science

How the GEP Informs the Higher Order Learning Process
In-person Testimonial by Chris Clemente

GEP by the Numbers



- What's offered?
- How often?
- What are the top-10 courses?
- When do students enroll?

Examples of Instruction: Composition I and II

The Writing and Rhetoric Department's first-year composition courses provide students with a strong foundation of writing and reasoning that is applied to all coursework.

Composition I

- read and write with credible sources
- use effective writing processes for writing different kinds of texts
- understand how and why writing is different in different situations
- adapt their writing appropriately for a variety of situations

Composition II

- read, analyze, and synthesize complex pieces of writing
- engage in their own original research
- interpret data and write about it
- explain why their research and findings matter to others

Practice and Paper: The Function of a Genre in Medical Discourse
Video Testimonial by Jacob Vogelbacher



Composition Courses Signature Work

First-year writing students have opportunities to demonstrate skills and knowledge they've acquired in their composition courses.



- a forum for the exemplary writing and research produced by students enrolled in the university's first-year composition courses
- celebrates writing that demonstrates an inquiring mind, compelling prose, and original thought



- first-year writing poster presentations provide students with the opportunity to speak about their research in first-year composition courses



Evolution of Cyber at UCF
Video Testimonial by Jacob Vogelbacher



Examples of Instruction in the Department of History
In-person Testimonial by Amy Darty

High-Impact Educational Practices: Undergraduate Research

Mentored undergraduate research projects leverage integrative and applied learning to expand a student's academic experience.



Office of
Undergraduate
Research

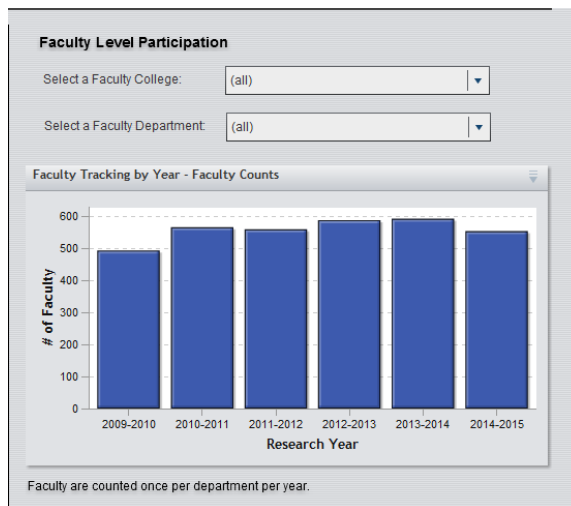
Students who participate in research projects:

- Gain high-level transferrable skills, such as evidence-based reasoning and problem-solving, and be able to apply them to a variety of settings.
- Deepen their broad and field-specific knowledge.
- Learn to work in teams by collaborating with faculty, peers, and community members.
- Earn academic credentials that expands their resumes by presenting their work at conferences, publishing their findings, and working with a research team.

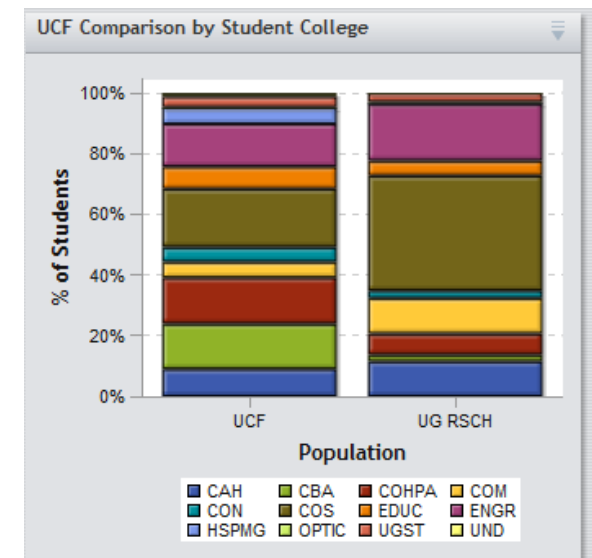
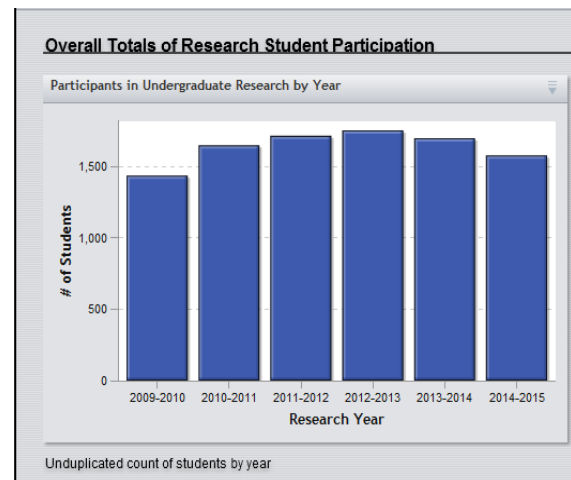
Faculty and Student Undergraduate Research Engagement

Strong faculty and student participation rates illustrate the importance of participating in undergraduate research projects.

Faculty Participation



Student Participation

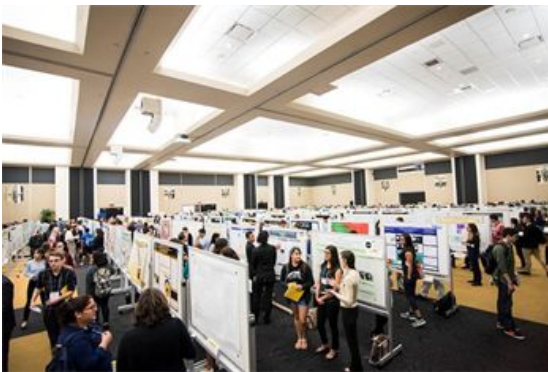


Annual faculty and student participation in undergraduate research:

- 500 – 600 faculty members
- 1,500 – 1,600 students

2016 Showcase of Undergraduate Research Excellence

Students engaged in undergraduate research have an opportunity to demonstrate their research and presentation skills.



- 342 poster presentations
- 450 undergraduate students
- 53 faculty judges
- \$24,000 in scholarships to the top student presentations



INFO-1

High-Impact Educational Practices: Academic Advancement Program

Information, guidance, and mentorship prepares traditionally underrepresented groups for graduate school.



- Academic Advancement Programs prepares students—especially non-traditional, low-income, and first generation—to pursue advanced degrees by increasing their knowledge of the graduate school application process, graduate funding, summer research and fellowship opportunities.
- The McNair Scholars Program is a federal TRIO program that prepares traditionally underrepresented groups for doctoral studies. Students participate in courses, seminars, and workshops on topics related to graduate school preparation, complete a paid research project under the guidance of a faculty mentor, and present their research at local, regional, and national conferences.

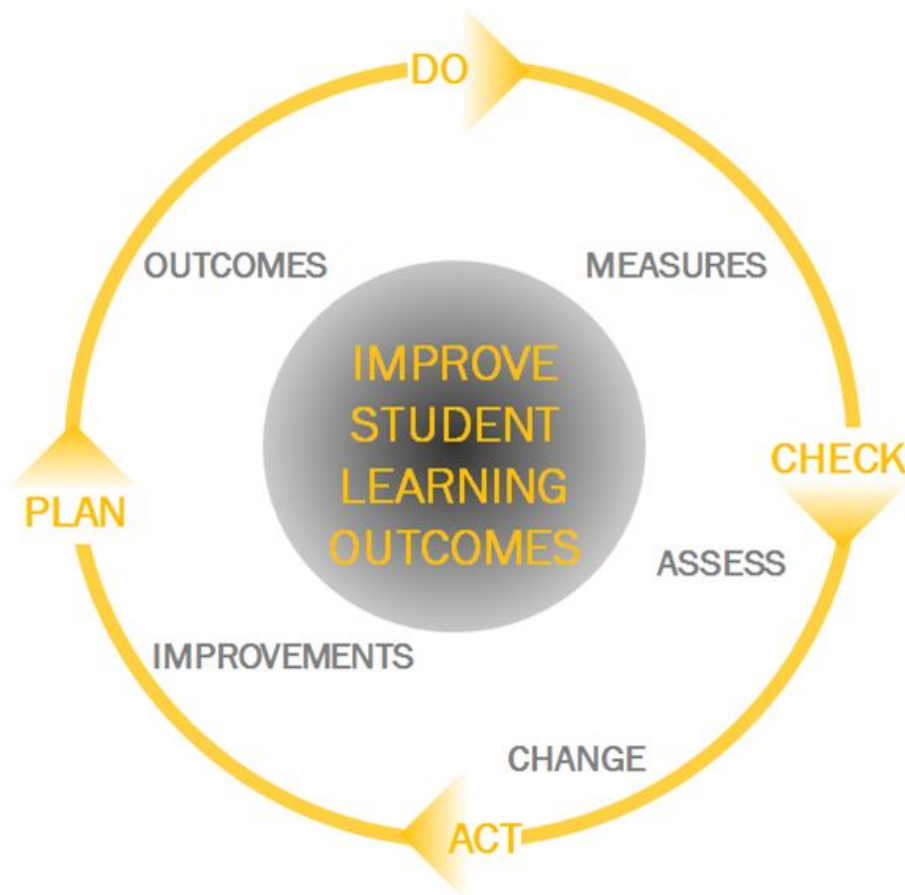
Academic Advancement Program Student Success

Since 2003, the UCF McNair Scholars Program has served more than 150 students.



- 80 percent of graduates have enrolled in post-baccalaureate programs. The national average for McNair Programs is under 45 percent.
- 100 percent of program participants have graduated from UCF (2003-15).
- 78 percent of program participants are first-generation college students (2003-15).
- 45 percent of program participants have community college experience (2003-15).

Assessment



Discipline Measurement: Social Foundation

POS 2041 American National Government

Define Outcome

- Students will demonstrate the ability to think critically about American national government and politics.

Measure

- Writing assignment that requires demonstrating higher order thinking skills that include comprehension, application, analysis, synthesis, or evaluation.
- At least 72 percent of students will achieve a score of at least 70 percent on the assignment.

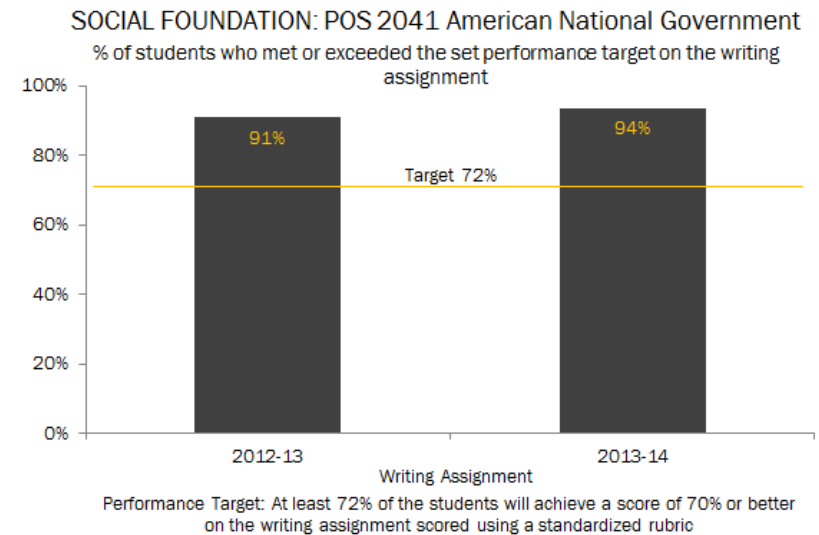
Assess and Change

- Enhanced faculty collaboration regarding course substance and structure.
- Continued emphasis on discipline specific knowledge as it relates to critical thinking and communication.

INFO-1

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Improvement



Discipline Measurement: Science Foundation

BSC 1005 Biological Principles

Define Outcome

- Students will demonstrate knowledge of DNA molecular structure and use it to understand cell reproduction and the causes of genetic disorders.

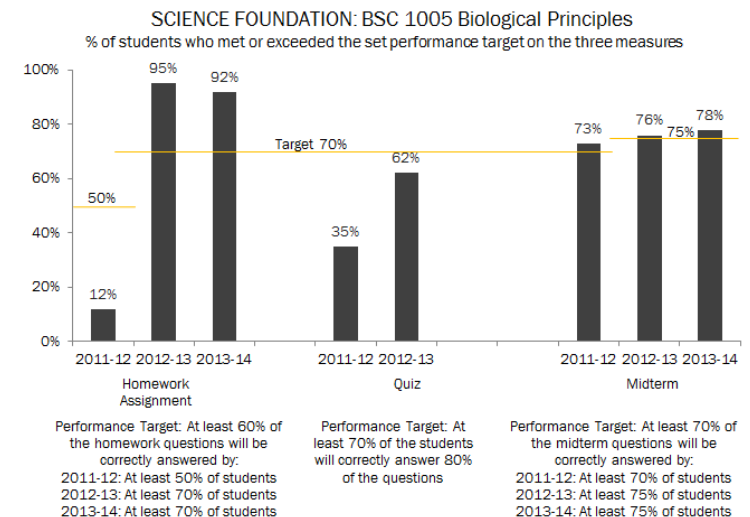
Measure

- Homework: 2011-12: 50+ percent students correctly answer 60+ percent questions. 2012-13: 70+ percent students correctly answer 60+ percent questions. 2013-14: 70+ percent in-class small groups will complete the entire assignment.
- Quiz: 2011-13: 70+ percent students will correctly answer 80+ percent questions.
- Midterm: 2011-12: 70+ percent; 2012-14: 75+ percent students will correctly answer 70+ percent questions.

Assess and Change

- Conducted review session in class on difficult concepts and homework discussion.
- Implemented small learning communities using peer instruction techniques.
- Made turning in homework assignments mandatory.
- Used online reviews and interactive homework.

Improvement



Discipline Measurement: Cultural Foundation

MUL 2010 Enjoyment of Music

Define Outcome

- Students will demonstrate knowledge of the basic terminology and nomenclature of western art music.

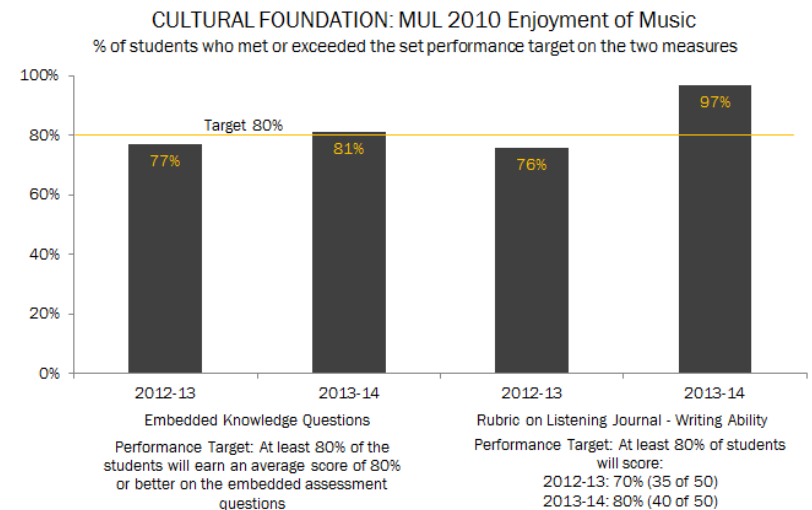
Measure

- Embedded knowledge questions: 2012-14: 80+ percent students will earn an average score of 80+ percent.
- Rubric on listening journal – writing ability 2012-14: 80+ percent of students will score 70+ percent or 80+ percent in 2012-13 and 2013-14, respectively.

Assess and Change

- Introduced scaffolding: practice quiz for embedded knowledge questions.
- Increased reminders for listening journal due dates.
- Provided bonus points for students who complete more than three of the six journals.

Improvement



How GEP Leads You Where You Want To Go
In-person Testimonial by Caitlyn Zona



What's Next?

UCF's Quality Enhancement Plan, *What's Next: Integrative Learning for Professional and Civic Preparation*, prepares graduates to successfully enter and participate in the next steps of their professional and civic lives.



- **Plan your path:** Students formulate their goals – professional, academic, or personal – and then identify the skills and knowledge needed to reach those goals.
- **Connect to the world:** Students participate in multiple curricular, co-curricular, and professional experiences and apply what they have learned to real-world contexts.
- **Reflect on your journey:** Students take opportunities along the way to assess what they have learned, think about how they learn, and articulate how their experiences will prepare them to achieve their post-graduation goals.



General Education Program (GEP) Courses

(36 credit hours required)

INFO-1
Attachment B

(Some majors require a specific course or a higher level course in some areas.
Consult your major requirements and advisor.)

A. Communication Foundation 9 hours

1. •ENC 1101 Composition I^{1, 2} 3 hours
2. ENC 1102 Composition II PR:ENC 1101^{1, 2} 3 hours
3. SPC 1608 Fundamentals of Oral Communication 3 hours
- SPC 1603C Fundamentals of Technical Presentations 3 hours
- COM 1000 Introduction to Communication 3 hours

B. Cultural and Historical Foundation 9 hours

1. EUH 2000 Western Civilization I² 3 hours
- EUH 2001 Western Civilization II² 3 hours
- HUM 2020 Encountering the Humanities 3 hours
- HUM 2210 Humanistic Tradition I² 3 hours
- HUM 2230 Humanistic Tradition II² 3 hours
- AMH 2010 U.S. History: 1492-1877² 3 hours
- WOH 2012 World Civilization I² 3 hours
- WOH 2022 World Civilization II² 3 hours
2. ARH 2050 History of Western Art I 3 hours
- ARH 2051 History of Western Art II 3 hours
- MUL 2010 Enjoyment of Music 3 hours
- THE 2000 Theatre Survey 3 hours
- FIL 1000 Cinema Survey 3 hours
- REL 2300 World Religions 3 hours
- PHI 2010 Introduction to Philosophy 3 hours
- LIT 2110 World Literature I PR: ENC 1102² 3 hours
- LIT 2120 World Literature II PR: ENC 1102² 3 hours

3. Take one additional course from either B1 or B2.
Consider that some courses also partially satisfy the Gordon Rule requirement.

C. Mathematical Foundation 6 hours

1. •MAC 1105C College Algebra² 3 hours
- MAC 2311C Calculus with Analytic Geometry I² 4 hours
- MGF 1106 Finite Mathematics² 3 hours
- MGF 1107 Explorations in Mathematics² 3 hours
2. CGS 1060C Introduction to Computer Science² 3 hours
- STA 1063C Basic Statistics using Microsoft Excel² 3 hours
- STA 2014C Principles of Statistics² 3 hours
- STA 2023 Statistical Methods I² 3 hours

D. Social Foundation 6 hours

1. •ECO 2013 Principles of Macroeconomics 3 hours
- ECO 2023 Principles of Microeconomics 3 hours
- POS 2041 American National Government 3 hours
- AMH 2020 U.S. History: 1877-present² 3 hours
2. •PSY 2012 General Psychology 3 hours
- SYG 2000 Introduction to Sociology 3 hours
- ANT 2000 General Anthropology 3 hours

E. Science Foundation 6 hours

1. •AST 2002 Astronomy PR: High School Algebra or MAC 1105C 3 hours
- PSC 1121* Physical Science PR: High School Algebra or MAC1105C 3 hours
- PHY 2020 Concepts of Physics 3 hours
- PHY 2053C College Physics I: MAC 1105C and MAC 1114C 4 hours
- PHY 2048C General Physics Using Calculus I 4 hours
- CHM 1020 Concepts in Chemistry PR: High School Algebra 3 hours
- CHM 2045C Chemistry Fundamentals I 4 hours
2. •BSC 1005* Biological Principles 3 hours
- BSC 1050* Biology and Environment 3 hours
- BSC 2010C Biology I 4 hours
- EVR 1001 Introduction to Environmental Science 3 hours
- GLY 1030 Geology and its Applications 3 hours
- GEO 1200* Physical Geography 3 hours
- ANT 2511 The Human Species 3 hours
- MCB 1310 Intro to Biotechnology and Genetic Engineering 3 hours

Satisfactorily complete one course in each of the twelve numbered areas (36 hours)

At least one course completed in each Foundation area must be a designated State General Education Core Course (•)

*A one credit laboratory is also available for this course.

¹A grade of "C-" (1.75) or better is required in this course.

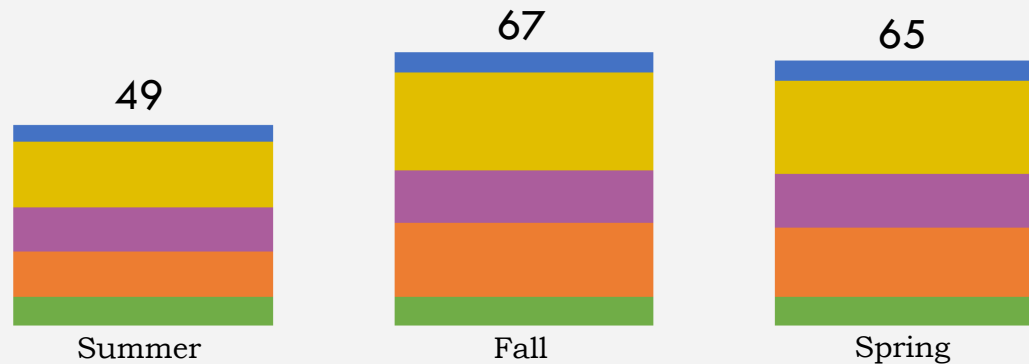
²A grade of "C-" (1.75) or better satisfies three hours of the Gordon Rule requirement.



2014-15 GEP Courses

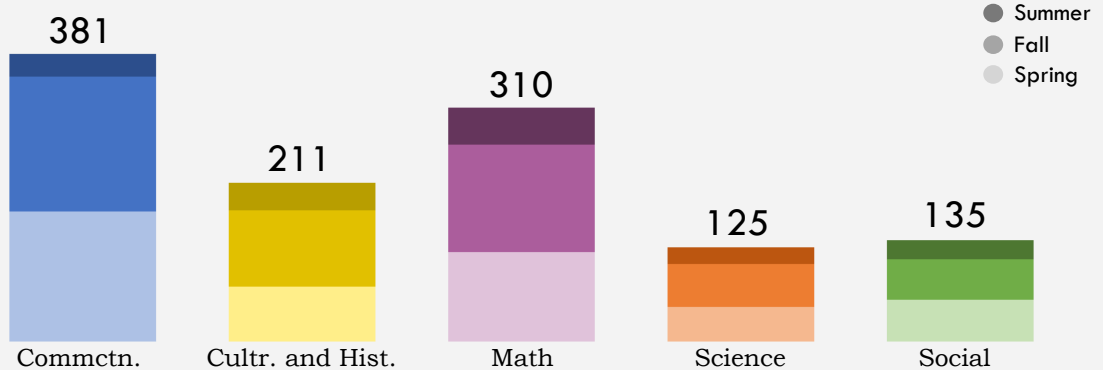
OFFERINGS

GEP courses offered by term



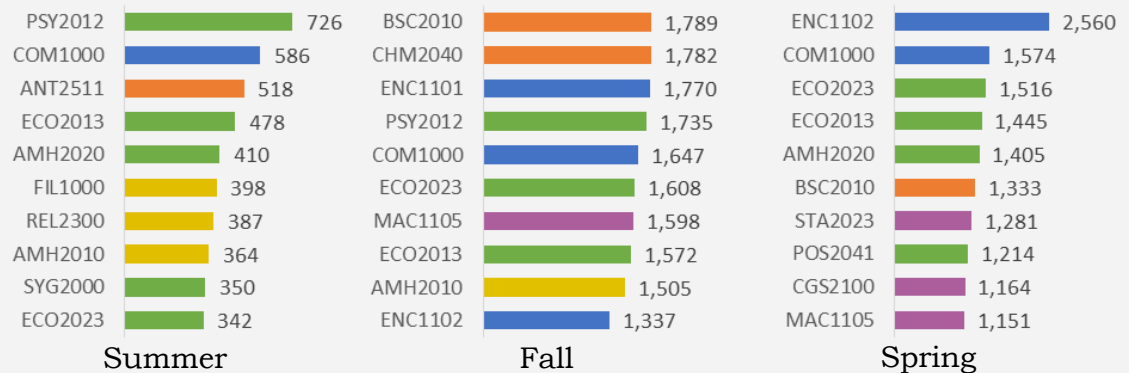
FREQUENCY

GEP sections offered by area



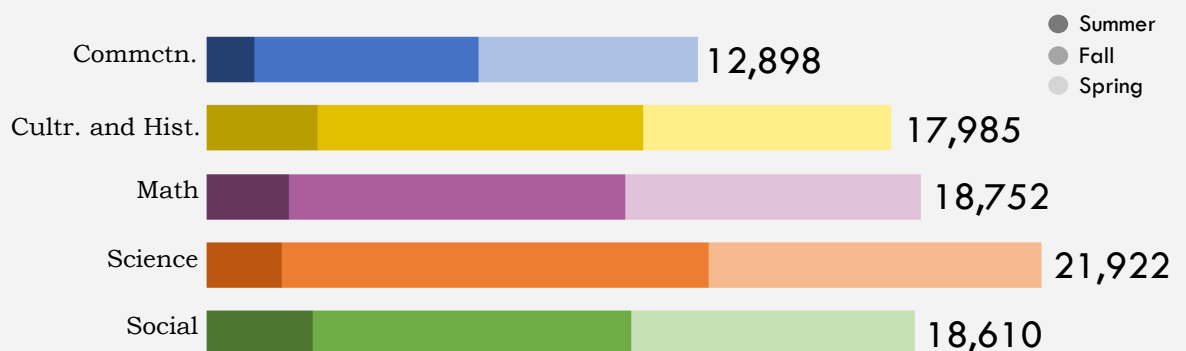
POPULARITY

Top 10 GEP course enrollment



TIMING

GEP enrollment by area & term



● Communication ● Culture and History ● Math ● Science ● Social



Change Is Possible for Everyone
TAYLOR JONES

**Navigating Authority in Coursework and Life: An Unofficial
Guide for Fellow Students**
WILLA MADDOX

**More than Just Pieces of Paper: The Role of Genres in
Professional Employee/Employer Relationships**
CAROLINE HALIK

**Digital Literacy and the Making of Meaning: How Format
Affects Interpretation in the University of Central
Florida Libraries Search Interface**
KOMYSHA HASSAN

The Rhetoric behind College Football Recruiting
KYLE COLTRAIN

Volume 5 | Issue 2 | Fall 2014

The Journal of the First-Year Writing Program at the University of Central Florida

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From the Editor

Are you an authority on anything? Do friends and family members all come to you, for instance, when they need help with a computer problem, or when they have a question about some bit of movie trivia? Whatever your particular source of authority may be, consider this for a moment: where does the authority actually exist? Does the authority emanate from you and your actions, or is it bestowed on you by the people who choose to trust you on this particular subject? Or does it exist somewhere in between?

Authority is, admittedly, a tricky thing. Add writing into the mix and it just gets even messier. As writing students, though, the subject really can't be ignored. The odds are pretty good that your instructor this semester wants you to try and claim authority on some subject or other, or perhaps to consider how others establish authority in writing in different sorts of genres and situations. It's not easy. I think a lot of writers (and I'm including myself here) find themselves plagued with self-doubt and anxiety during the writing process, so to then try to construct something that somehow sounds authoritative—or at least worth paying attention to—can seem, at times, impossible.

These questions related to authority are at the heart of all the articles you'll find in this issue of *Stylus*. Whether the writers have taken up the subject directly or simply demonstrate what authority in writing can look like, I think they'll give you a lot to think about as you consider the role of authority in your own writing.

The first article in this issue is Taylor Jones' "Change Is Possible for Everyone." Jones details some experiences with writing in high school that may be relatable for some of you. These experiences led her to learn how to think about audience in a more useful way and, ultimately, to understand that her writing really can have an impact on others. This is an important lesson, and one deeply related, I think, to what it means to have authority in writing.

Next up is Willa Maddox's "Navigating Authority in Coursework and Life: An Unofficial Guide for Fellow Students." Maddox takes the issue of authority head-on in this article, focusing on the importance of acquiring authority in the context of specific communities. This has implications, she argues, for not just what we learn but *how* we learn it. Students in first-year composition classes should find Maddox's discussion quite useful.

The third piece in this issue is Caroline Halik's "More than Just Pieces of Paper: The Role of Genres in Professional Employee/Employer Relationships." We've chosen to excerpt the

introduction and review of literature from a larger article so that you can focus in on some of the moves Halik makes here. Note particularly how Halik positions her question and thinking alongside those of other authors in order to help her claim authority as a researcher. The ideas Halik presents about genres and how they work will likely be useful to you as well.

The final two articles in this issue of *Stylus* are the results of extended research projects in ENC 1102 courses. They differ in both subject and method, but I think you'll find both to be stellar examples of student researchers establishing their authority to speak meaningfully to issues that affect the University of Central Florida. First is Komysha Hassan's "Digital Literacy and the Making of Meaning: How Format Affects Interpretation in the University of Central Florida Libraries Search Interface." In rhetorically analyzing the search interface in the library, Hassan provides a tangible example of the intersection between digital literacies, rhetoric, and the construction of knowledge. Moreover, her careful discussion of the search process itself makes this article a good read for any students conducting research in the library.

Last but not least is Kyle Coltrain's "The Rhetoric behind College Football Recruiting." As a player on the Knights' football team himself, Coltrain combines his insider's perspective with secondary research to develop a compelling investigation into what works to recruit student athletes. His article should make for an interesting read for both fellow student researchers and fans of UCF football alike.

We hope you enjoy this issue of *Stylus* and find it to be helpful in your explorations of what writing and research can accomplish. We also hope that you'll consider submitting your own work for publication in the journal; at one time or another, all of the students published here were sitting in a composition class, just like you. To read about their experiences (and, sometimes, struggles) along the way from receiving an assignment to being published, be sure to take a look at the writer's statements accompanying each essay. If you're interested in submitting work to *Stylus*, simply ask your composition instructor to forward the piece you'd like to submit to the journal and we'll take care of the rest. If you have any questions about this process, feel free to contact me at Matthew.Bryan@ucf.edu.

-Matt Bryan

Change Is Possible for Everyone

TAYLOR JONES

Produced in Nathan Holic's Spring 2014 ENC 1101

Growing up in a small town outside of Cleveland, Ohio, I was surrounded primarily by drugs, gangs, and violence. There isn't a single soul in the world that hasn't personally felt the effects of drug addiction or witnessed the effects from afar. Both of my parents struggled with addiction, and the summer following 4th grade, I moved to Florida with my mom in hopes of a better life. That following year, my father was incarcerated for seven months on drug-related charges. Being as young as I was and, on top of that, a daddy's girl at heart, his drug addiction really took a toll on me. He was released from prison within the same year, and, thankfully, he found a whole new world in his recovery. He attended Narcotics Anonymous meetings anywhere from one to three times a day, and, when I would visit on vacations, I went along with him. He soon worked his way up in the program to county chairman and began travelling to tell his story to those still struggling. My dad's addiction has impacted my life both positively and negatively, but I never once thought it would intervene and shed a positive light on my academic life. More specifically, it helped me to approach writing very differently.

I had always been a decent writer. My essay grades were satisfactory, and I never had any trouble giving just the right amount of information and detail to pass assignments or standardized tests. But in my freshman year of high school, I would experience a transformation. I would slowly become a more passionate and independent writer, as opposed to a "whatever, I'll just do the basics to get a passing grade" writer.

All the way through my 7th grade year, I was taught to keep my personal voice out of my papers. I was taught to be specific, but not too specific, and I was told to give examples, but not too many. How was I to be specific but not specific all at once? How was I supposed to tell a story with only a few details? None of it ever really made sense to me. I called those twisted rules the *You Can't Do That Rules*; however, as long as I abided by those rules, I would never fail... in the grade book. My teacher was always pleased enough. In 8th grade though, I began to just free write. Screw the rules; I was going to try something different because whenever I had to look back at my pre-8th grade compositions, I was confident in myself, but my teachers never were. I wanted to do something different to regain my personal pleasure in writing. And this plan? Well, it failed. Epically.

When high school started, I was taking all Honors and AP classes so I decided to revert back to the *You Can't Do That Rules* because whether I was pleased or not, my teacher always was at the end of the day, right? With all that I had on my plate during my freshman year, I was willing to take any necessary and appropriate shortcuts to keep my grades up. I began wondering, though, when I would be able to start writing for myself, or even just an audience larger than my teacher. With every paper I wrote I envisioned my teacher, and with their face in mind I wrote to and *for* them. This is what stripped me of the passion I once had for writing. Even if I was writing in my diary, I was writing for myself, and if some sneaky hands got on it, a larger audience would be entertained as well. I finally realized the largest constraint in my writing process: writing for an audience. I had always written for a single person, as if my paper never had the opportunity to be read by someone else. The *You Can't Do That Rules* had me so trained in pleasing my teacher, and I honestly never

thought I would be able to successfully break free and write for a larger audience while still pleasing my teachers.

At the end of my freshman year, we received our final essay prompt: Heroes. I was told to write an essay about my Hero, someone who has changed and impacted my life for the better. My dad came to mind instantly. I knew I could really tell a story about him overcoming his struggles, but my writing process was so limited and overly structured that I couldn't figure out how to start. However, I knew as passionate as I was about my dad's recovery that this would be my break-free moment. I was going to make sure of it.

When I started writing the essay, I was writing as if I was speaking about my dad -aloud at a Narcotics Anonymous meeting. At the meetings, the addicts would share details about instances that changed their lives or instances that worsened their struggles. I remembered my dad always speaking of his sponsor, Ralph, and how he learned from his struggles while overcoming his own. I was writing as if my dad's struggles changed my outlook on life, and, in reality, they did more than anyone could ever fathom. Soon the rough draft was finished, and then I had to submit it for peer review. My story was so powerful and emotional that one of my classmates cried. I was shocked. Would my teacher have the same reaction?

A week later, I did a little editing on my peer-reviewed rough draft and handed it in to my teacher. That day, little to my knowledge, would turn out to be one of the best days of my life. The day our final drafts were due, we had a two-hour block for our exams. So my English teacher, Mrs. Dixon, decided to try and grade as many essays as she could during that block period. My exam was finished, so, like a typical high school student, I pulled out my phone and started texting secretly. Then in the dead silent room, I suddenly hear my teacher call my name. Damn it. Busted. I was called up to her desk and I instantly apologized and put my phone in my pocket, but she looked at me like I was crazy. She said that she had no concern about my cell phone, but had serious matters to discuss with me about my paper. Great. So much for the teary-eyed reaction. She pulled me in the hallway, and at that point I was sweating bullets. Did she think I plagiarized? Did the drug topic offend her? She was standing in front of me giving me the stare of death, and then out of nowhere she hugged me and started crying. She told me that she was so proud of my paper and that it really touched her. I couldn't believe it; I was overwhelmed with joy and the sense of accomplishment. I finally did something for myself and I succeeded. She asked me the following day to read aloud my essay in front of the class, and I will never forget the feeling I had when I received praise from my peers after class. I had suddenly inspired people to take risks in their essays by actually utilizing their personal voice and experiences. I was so proud of myself. After class, I called my dad and told him all about it. I read him the essay and his reaction, by far, gave me the greatest reward of my paper. He absolutely adored it. He asked me to send him a copy via email, so I sent it, never expecting it to leave his email.

That following summer, I flew up to Ohio like I always had and attended the Narcotics Anonymous meetings with my dad as usual, but my experiences at the meetings were suddenly nothing like what I was used to. Narcotics Anonymous is a naturally welcoming organization, but the type of love I was receiving from people was at an all-time high. Compliments were thrown back and forth about the bond my dad and I share, and I couldn't understand why. I loved the compliments, but what had fueled them? I was unaware that my dad printed out my essay and read it aloud to the meetings that he had traveled to. Nearly 75% of addicts have children, and the fact

Although not all of my essays are read aloud to people, I now know how to approach my essays and who to write for: myself and others, not just a single person. I realized that when I pleased myself, I pleased others.

that I, a child of an addict, felt that proud of my father really gave empowerment to the addicts still struggling. It gave them hope that their kids still loved them, and that their bonds could still strengthen throughout the recovery process.

The feeling of knowing that I gave people the same strength that I had given my father to recover is a feeling that I experience every day. Every time I talk to my dad, I remember all that I put in that essay and how the story behind it is what allowed me to speak to my father via his personal cell phone and not a jail phone. It allows me to talk to my father at all because he's simply living and breathing and not underground because of his addiction. All of this from a simple essay. I broke all the rules, and ignored my teacher. Who would've ever thought that in doing so I would've produced such a powerful and moving essay?

Although not all of my essays are read aloud to people, I now know how to approach my essays and who to write for: myself and others, not just a single person. I realized that when I pleased myself, I pleased others. My passion for writing had a rebirth, and I am now a more independent writer than ever.

Taylor Jones



Taylor Jones is currently a sophomore at the University of Central Florida. She is a proud Mathematics Education major. She has always been a dedicated student, and has allowed her academic life to flourish through tough battles in her personal life. She one day hopes to share her love of math and passion to help others in her future career as a math teacher. In her free time, Taylor enjoys simply spending time with those she cares most about. Being a full-time college student, time spent with loved ones is often cut short or substituted with school work-related tasks. Great accomplishments like these are what she works so hard for. She loves her university and is looking forward to continued successes and involvement at UCF in future semesters.

Writer's Statement about "Change Is Possible for Everyone"

TAYLOR JONES

My biggest fear coming into college was of the tedious, unnecessary, and boring papers I would be forced to write. My writing had always gotten by, but a college paper?! I was truly terrified. In fact, I was so terrified that I chose to avoid taking my first Composition course until my second semester. I was definitely blessed when I chose Professor Nathan Holic's ENC 1101 class. I'm currently finishing up my third semester here at UCF and I have, hands-down, personally absorbed the most from his class. It was such an interactive class. We were required to write 3 Core Essays which comprised a large majority of our grade, and each of the essays required a "Shitty First Draft." This unique method of drafting is something I can/will apply to every class that I take. Pretty much it was set out to make you take your initial ideas on the topic and throw them on paper with no organization, just free-flowing ideas. After I could actually look at my thoughts in front of me, as opposed to having them stuck in my brain, it made the organization process much easier. I could see what areas needed more development, and I could also weigh the significance and relevance of my ideas to the subject of the paper. I swear by this method because I can't find a single flaw in it. There is no set length, no set anything, and one draft is no better than the other. It serves two purposes: to get your fingers typing/writing and to get your ideas flowing. This Writer's Statement you're reading now is actually a product of a Shitty First Draft.

My essay "Change is Possible for Everyone" was my Core II Essay, and I was prompted to address one of the largest struggles in my writing process, and how I had overcome that particular struggle. Throughout my academic career drafting and writing for audiences were undeniably the hardest things for me to accomplish. Thankfully enough, Mr. Holic's Shitty First Draft method helped me to overcome my drafting struggle in my first composition class at UCF; however, as far as writing for audience is concerned, my essay depicts the process in which I had overcome that struggle.

Navigating Authority in Coursework and Life: An Unofficial Guide for Fellow Students

WILLA MADDOX

Produced in Melissa Ringfield's Spring 2014 ENC 1101

*D*ear Students,

This guide attempts to give you the info you will maybe use sometimes in a class here or there to let the teacher know you read the book and came to most of the classes. You could get a C probably if you read this, or just continue to do what you did in high school, that should be fine.

What is wrong about that opening remark, or maybe a better question, would you ever take the time to read or pay attention to something that provides mediocre gain, or more accurately, no change from what you already do and know? The answer is no—it will always be no. There is a reason that high school ends and that college or careers progress out of dedication and intensive focus in particular subjects, or passions, or values. And there must be structures in place to ensure that that focus elevates the field or the individuals that make up our society. So let's start again:

Dear Students,

This guide contains the information you will need to know about writing with authority in college coursework. It will provide you with the understanding of what authority means under this context, what the goals and objectives of authority accomplish, explain the core concepts or ways to create authority, and offer examples of students who used authority to their advantage, and the consequences for those who chose to ignore or deny their own use of authority. I will provide you with practical applications to highlight these main aspects on authority, using relatable examples for you to explore within your own mind what authority can and should mean for you in college and beyond. I will integrate ideas and concepts from respected professionals within the fields of rhetoric, linguistics, and education to substantiate my own ideals and opinions of what writing with authority means, with the purpose of encouraging you to do the same.

Where does authority exist, and how does knowledge affect authority?

Imagine yourself in a group setting where you overhear a conversation that interests you or can benefit you in the future. You do not know who the individuals are within the conversation, and some of what they speak of is unfamiliar to what you have understood from your past experiences.

You attempt to join the conversation, but both you and the others soon recognize you do not really know what you're talking about, so you shy away humiliated as they snidely remark on your ignorance.

Now imagine yourself in the setting of a college course, where you do not know what is expected of you to fulfill the requirements of what would be deemed an "A" grade. You foolishly have ignored the suggestions or provisions provided by the professor, and you were unaware that it is acceptable and encouraged that you seek feedback and contributions from fellow students. You receive a grade that is lower than what you know you are capable of.

Finally, imagine yourself in a position within a company you respect, one that you are most fortunate to have been employed with. You again underestimate the expectations of the position, of the company, of the desired outcomes of your own work and efforts. You fail. You are fired.

What do all of these examples have in common? You have not established or used authority appropriately. You have not considered the situational factors that play into each of these instances. What should you have done at the onset of each of these situations? You should have been asking yourself different questions altogether. You will always learn more if you decide that *what* really isn't the question you should be asking; it is the *why* and *how* that lead to greater understanding, to change and transformations. For the purpose of exposure and to establish a base point for your own progressive thought, we must begin with *what*. High school instruction and coursework is great at *what*—the concrete, the definite, the *domain knowledge*, or knowledge that is specific to a particular subject area or field, such as the memorization of all 206 bones in the human body you needed to know within Anatomy class, or the numerous dates you had to remember for United States History class. Domain knowledge, though it does change incrementally within any given field as new discoveries are made, is tangible—you will see it written in the form of facts and figures and it will be common to and prerequisite to all within that subject or field.

Contrastingly, *rhetorical knowledge* is knowledge of the situation you find yourself within whenever you engage in a conversation or communication with other persons, from the slightest exchange between friends to speaking in front of a lecture hall full of your peers for a speech course. When speaking to the close friend about where to have dinner together, because of your past experiences with her or him, you are aware that discussing a restaurant he or she may not be able to afford would not be helpful in reaching a decision, so you do not even bring it up. Your rhetorical knowledge of your friend's financial situation causes you to act accordingly. In the speech course situation, you would consider the factors that would make you successful in the exchange as well—the *why* and *how*. Why have you been given this assignment? Why is public speaking important? How can you deliver the best possible speech to this particular audience? How does your position as a student speaker affect your message? And how can you use domain knowledge (the subject being discussed) to relate to the professor and your peers that you understand what the assignment functions as (rhetorical knowledge)? So why do domain knowledge and rhetorical knowledge matter? They facilitate your ability to have and use authority. So let's begin there.

You will always learn more if you decide that *what* really isn't the question you should be asking; it is the *why* and *how* that lead to greater understanding, to change and transformations.

What is authority in writing in college coursework, and what agents facilitate authority?

Authority under this context is the ability to use your knowledge within a subject matter (domain knowledge) to communicate your own position or claims to others in a manner so that it becomes part of the continued conversation regarding that subject matter. It may be contested or accepted, but it must be significant in power and scope, dependent upon the person or situation; it has substance. Authority is highly dependent on the *discourse community*, the individuals that make up a collective group who have in common goals, which may be communicated through agreed upon channels to share knowledge as well as critique discrepancies. Similar to a hierarchical chain of authority, there exists novices and experts, both serving their individual purposes to support any given discourse community. The former provides the legwork, adhering to and perpetuating the conventions used to achieve the community's shared goals. The latter provides the knowledge and know-how, the history of and the directional lead for change, should it be deemed necessary—it will always be necessary.

So what are conventions? *Conventions* are constructs of human design that facilitate effective communications. They are agreed upon ways of accomplishing shared goals, and they exist in varying degrees of formality; every discourse community exemplifies and controls its own unique set of conventions. Conventions range from the established abbreviated terms used within a group of friends to express shared meanings in text messages (lol, brb, btw, and the ever annoying # (hashtag)) to the format required to submit a document in a college course (Microsoft Word or Google Doc; MLA or APA) to the frequency of budget meetings to reach bi-quarterly quotas in the finance department. Conventions are used as shortcuts or as a means of communicating through systems that have been established in the past with enough success to garner further use. These systems do not and have never existed in the natural realm of planet Earth; we have made them up to serve the purposes we need them to. Further, *genres* have been created as specific or standard types of texts or communicative instruments with general commonalities and a recognizable identity. Television genres are most easily recognizable to illustrate this point: game shows, reality shows, sitcoms, documentaries, newscasts, dramas, sports programs—we could go on and on. Even if you are not a fan of one of these particular types of shows, you would likely be able to recognize its main features or characteristics. Genres function the same way in the discourse community they serve: anyone familiar to the discourse must be able to use the genre effectively or else they face the consequences of not abiding by expected conventions, which function as a means of communication used by members of the discourse community to meet its objectives and shared goals, where authority over the subject matter enables the conversation to progress, thus allowing the community to come closer to achieving its goals.

What are the goals and objectives of authority, and what do they accomplish?

As a student, your role in high school was often to provide your instructor a regurgitated account of facts and figures—an undigested version of the information presented during class or of which you read—void of your personal opinions or beliefs unless it was a reflection piece. And rightfully so; what authority did you have over the Western expansion of capitalistic ideologies as it affected frontier life and free enterprise? None, but you could have. If high school's purpose was stated more clearly to have provisions of “an information-transfer model of education” (Penrose and Geisler 612) where factual foundations were created with the clear intention that college would build on these later by developing the true, transferrable knowledge of why and how, we would have no issues. But this is rarely the case. There is no promise and no agreement that high school will provide this and college will do that. Not every individual enters or

completes college, and it is not always necessary. So we cannot make such agreements, and we must change the delivery and timing of when knowledge is permitted to be exposed to our youth.

Education paradigms, once moving at a glacial pace, are now experiencing dramatic shifts, as the educators themselves have become active researchers. Ann M. Penrose and Cheryl Geisler, authors and linguistic researchers, believe traditional approaches of information-transfer models of instruction are being contested by constructivist views of knowledge, where repercussions play out in varying degrees of consequence (612). But if knowledge is constructed, as Penrose and Geisler suggest, these contrasting theories both lead to “assumptions about individual authority [which] shape the way individuals approach intellectual tasks” and “determine the extent of the power that individuals are willing to claim within the educational and larger social system” (612). If you believe your role in your own education is merely reporting the facts, as their case study subject Janet did in her own experiences, it would not be radical to perceive that a lack of authority would pervade your approach to knowledge either, like it did for Janet as well. In a similar respect, linguist James Paul Gee suggests “that a person could be able to use a language perfectly and *still* not make sense” (483). If you apply that to knowledge gain, merely reciting the facts or the language do not equate to understanding *why* those facts matter or *how* that language has constructed that meaning.

So what are the goals and objectives of authority, and what do they accomplish? They give you ownership over your own education, and your own knowledge base. We are in a continual state of learning, of formulating and expanding our knowledge. Will we always be expanding and adapting our knowledge? The answer will always be yes, as conventions, genres, discourse communities, and authority are also in a constant state of revision and being repurposed to reflect the needs of the society that has created them.

How do we create authority, and why do these concepts matter?

Aristotle has long since left the Earth in *fact*. But in *practice*, his notion of *ethos* continues to prevail in discussions of authority. Ethos is credibility; it is establishing your authority with a given discourse community or context, through conventions or tactics commonly practiced within that discourse. As a college student it will be imperative that you understand this idea. While it has been mentioned that a constructivist view of knowledge is your main goal, the minor goal of recognizing

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each course or situation’s conventions of authority will facilitate that objective. You must use rhetorical knowledge of each course or assignment to be successful. To apply this concept so you may recognize its implications for you as a student, consider researcher Lucille P. McCarthy’s notion that “learning to write should be seen not only as a developmental process occurring within an individual student, but also as a social process occurring in response to particular situations” (671). Her suggestion of writing as a means to develop knowledge within an individual also serves to maintain the conventions utilized in discourse communities and within their specific genres. The same can be said for academic communities, where scholar and linguist Ann Johns notes that discipline-specific

allegiances exists, but a more universal interest in the development of student competencies and in generalized rules for scholarly communications connects those across varying fields. This interconnection leads Johns’ discussion towards textual conventions, the *how* and *why* they were created to provide a framework of acceptable use for diverse disciplines trying to communicate, interact, and borrow from each other’s work (503-4).

Why does this matter to a student attempting to create authority? It is necessary for new people to continue to enter and perpetuate a discourse community. This allows individuals to gain acceptance into that community and gain valuable school or career opportunities; otherwise, they

risk being left behind in society. New members drive the discourse community forward as well; without new members, a community risks losing its position in society and becoming irrelevant in any conversation or discredited out of authority. It is about maintaining and expanding power or dominance within society, and also admiration and prestige, which in turn lead to power. As a student now and later when you enter a profession, it will always be important that you recognize the interplay between authority and college courses, discourse communities, and the society they are a part of. Within each of these contexts, there will always be what Gee calls *dominant Discourses*, the “mastery of which, at a particular place and time, brings with it the (potential) acquisition of social ‘goods’ (money, prestige, status, etc.)” (485). Affiliation with dominant Discourses is often deemed most desirable, most popular, and most influential. Should you wish to enter one of these dominant Discourses, be it the Student Government Association or the American Society for Public Administration, it is of no consequence *why* you want to be a part of that community if you are unable or unwilling to play by the rules (the conventions, genres, use of authority, language, and so on) of that community; you will fail to be recognized as a viable member due to your lack of obedience. And why is this important to you as a student? To put these last couple of thoughts in a more positive light, it may help to think of the functional or practical applications: professionalism and formalities exist to ensure quality and standards elevate the individual, the discourse community, and the society. Should there never exist a desire to move past what has been accomplished so far, “an elite group that imposes its language, beliefs and values on others” (Prior as qtd. in Johns 513) would not be found over and over again in our society. But they are always found—they always will be.

More specifically, as a student, you must know what the expectations are for each course you enter (rhetorical knowledge), but understand that any knowledge gained, whether it be domain or rhetorical, could have a purpose later in your development. Within her study, McCarthy demonstrates how Dave, a student enrolled in different courses over three separate semesters, did not relate his experiences in each as having any purpose to serve him in his future endeavors. Dave impeded his own success in his acquiring transferable knowledge, as he continually saw himself “in a new foreign land” (McCarthy 685). What is often forgotten in an academic setting is the universal goal of creating multifaceted students who possess the very foundations universities were designed to instill within societies (McCarthy 694-5). I hope in understanding conventions within college coursework, it would be an explicit given that reading assignments and being prepared for class are basic tools that are easily acquired to increase domain knowledge.

Does domain knowledge *help* create authority? Yes, it does—it always will. Consider the example of the conversation you found yourself in at the beginning. Would it suffice to say that if you had no idea what was being discussed, you would not be able to communicate or comprehend for that matter? No, you would not. But if you *do* know the subject matter, you could be part of the conversation—until it shifts beyond your scope of informational knowledge towards conceptual or implicit meanings. And what if you disagree but cannot say *why* you differ in opinion from your peers? Most often, your opinion will be respected if you have knowledge to back it up or if you can tactfully persuade others with a distinctive delivery of original thought, regardless if they agree with you or not. And *why* is deviance important, or *how* does it function in the conversation, and in writing with authority for that matter? It allows the conversation to continue, encourages contemplation, and all academics, professionals, and individuals enjoy their thoughts to be meticulously scrutinized lest they be forgotten.

In her article, Johns asks the audience to consider what discourse community means not by providing a definition, but in posing a series of questions aimed to allow students to explore concepts. Her purpose is to inspire students to join the conversation, not by providing a direct answer, but by presenting questions that prompt readers to consider meanings and expressing the need for adaptive tactics for moving between connected communities. Penrose and Geisler demonstrate this concept similarly in their discussion of Roger, a student who employed case

studies to connect to, remodel, and restructure his previous knowledge in order to develop his own thoughts and construct new knowledge. His ability to construct knowledge by evaluating different and sometimes conflicting claims allows him to consider alternatives and arrive at his own conclusions. In contrast, Penrose and Geisler's other subject, Janet, adheres to a reporter-style approach of constructing her work. This approach not only positioned her to adopt a preexisting view, but placed her as an outsider to the conversation, where she could not deviate or vary from the sources' opinions. This in turn prevented her from developing her own opinions (609). Recall the bar scene in *Good Will Hunting*: Will is able to "get the girl" by emasculating the yuppie, pony-tailed character who attempts to prove his superiority by merely spitting out the ideas and concepts he memorized from a book; Will chastises him for being unoriginal. Though your aims and goals will not always be related to your love life, constructing your own original thoughts by applying domain knowledge effectively to knowledge of any given rhetorical situation will prove advantageous, time and again.

The reality is you are a student, and such a position almost undeniably suggests you need a mentor. So what do you do? Seek guidance, young grasshopper! To be successful in establishing authority in your writing (and in your life), you will have to align yourself with those who also have already done this. In college, this will be your professors—it is their chosen profession. It is a relationship, as you must understand their criteria and they must provide you with what that entails. As McCarthy notes, "Students and teachers. . . share a common aim and are engaged in a cooperative endeavor... the newcomer making trial efforts to communicate appropriately and the native speaker responding to them" (676). This relationship epitomizes authority in use and how you can gain it yourself. Your professors not only act as transactional managers of the grade you will receive, but as a transformational leader which may shape your acquisition of knowledge. The idea of apprenticeship presents itself time and again within college coursework. With every new class "enculturation. . . into social practices through scaffolded and supported interaction with people who have already mastered the Discourse" (Gee 484) becomes the tool by which you may gain the knowledge, and therefore the authority, to develop and progress as an individual agent of influence. Listen to the masters of each discourse you enter, but interpret their constructs as a means to develop your own. But wait! You are not ready yet. You will have to play by their rules for now—it will always start this way.

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Willa Maddox



Willa Maddox is currently a junior at UCF. She is pursuing a bachelor's degree in Public Administration, with minors in both Writing and Rhetoric and Nonprofit Management. In merging the written channels of public discourse with the practice of equitable measures through composed dialogues, Willa hopes to aid in efforts toward world peace and global equality! No matter if she constructs grant proposals or crafts presidential speeches, she will take pride in serving all fellow human beings. Willa has been placed on the President's Honor Roll, receiving a 4.0 for every semester of attendance at UCF. She loves Jeopardy!

Writer's Statement about "Navigating Authority in Coursework and Life: An Unofficial Guide for Fellow Students"

WILLA MADDOX

If I were not given limits or constraints or timeframes, I would keep writing forever. I would edit and add, place in new meanings and tricks, search for more information and consider other viewpoints as I grew and as the world changed. I would be specific and subtle on one occasion and then in the next make philosophical claims so remarkable and challenging I would have to re-convince even myself that they may be possible if further work were done to establish a basis or reinforce the connection. Then I could keep writing; I could keep making it better. But I am not quite that available as far as the free time, and college coursework and life in general commonly resist such boundless fancies. There are rules by which we must live, but writing in college tolerates some bends in its conformities. And there are necessary channels for any gain or accomplishment, but writing in college accesses these authorities.

To begin this piece on authority and coursework, it was stated in my ENC 1101 class that we would be composing a work presented as advice for incoming freshmen students in the first-year writing curriculum. Reflecting back on the process as a whole, I would like to believe that a sigh of disdain escaped my lips as my forehead crinkled in despair and my arms folded tightly to my chest to display my despise for the entire assignment. This was probably not how it actually played out. No, I most likely just internalized my thoughts regarding writing to students, of which I generally displace as not my audience, and I do not typically write in the less formal style that an essay-style genre calls for. Through my lament, I began to construct my work, and though I knew this would be the most difficult paper for me in this course, I recognized others in my class would find it less problematic. And there was my solace—I was writing for others and to others, and, in this sense, the very resources and test subjects were all around me.

While composing through various aspects and components, I crafted as though it were a question and answer session, and although only one "voice" in the conversation is provided, I imagined it as if each answer reveals in the mind of the observer and speaker a subsequent place to deliver or detail a follow-up question and response. Maybe in this sense what I am truly doing is asking repeated rhetorical questions that were not necessarily asked, but will be given an answer regardless. With that structure in place, the background research of scholars and linguists enter the discussion as the subject area experts, the people in the white lab coats who insert their knowledge

MADDOX | WRITER'S STATEMENT

with opportune timing. To ensure others would decipher my intentions, I asked the opinions of my classmates. Did they understand my references to Good Will Hunting? What short-hand codes were popular and in use in social media? I also compelled the audience by placing common occurrences found in college life: speech class, dinner with friends, mingling into conversations, thoughts of career prospects, reminiscing to high school, television watching, considerations toward new insights or knowledge, challenging societies' structures, dating. This not only offers referable examples, but places them into a position of the student mind frame of listener, a place they know all too well, and whether this is recognized or not, they may begin to pay attention by way of association. My peers became integral, supportive assets as both inspirations and consorts.

This particular piece gave me freedoms not so readily afforded in other college work. Per Professor Ringfield's instructions, I was given the liberty to utilize any genre I deemed fit. This autonomy allowed me to integrate what I usually leave out of my written work: me. The stuffy genres leave little room for self-inclusion, which I typically enjoy omitting. However, given the audience, and a choice to deviate from my normal modes, I chose an informal essay as it best permits a dialogue between speaker and listener and across lines of inquiry. And though I chose to maintain my standard of not writing in first person, I see myself peek out from behind the lines of my text: I am a Public Administration major, I love using repetition, I was able to use huge run-on sentences (though they were technically correct) which for some reason I find enticing, I want to challenge others to think about societal pressures, I also enjoy having dinner, and I was able to use some form or amount of humor (right?).

This piece allowed to me to counter issues faced by so many college students—writing and utilizing authority both within academic studies and life. What is college if it is not an orientation into life, the exposure and the examination toward self-discovery and knowledge of our world, and the navigational tools that come from such processes? To circle back to the prompt given in my ENC 1101 class, it was stated that it would be an advice piece for other students. But now when I think of it in this moment, who or what freshmen were going to read my work, where were they—I never met them? And then it becomes apparent. I was that student and my classmates that reviewed my work were the freshmen. Clever little trick. We were learning through doing, discovering while writing. We were gaining authority by studying its applications and mechanisms, and we were being given the ownership of our own education and construction of knowledge. Quite, quite clever. Well, maybe now others will be able to read it!

More than Just Pieces of Paper: The Role of Genres in Professional Employee/Employer Relationships

CAROLINE HALIK

Produced in Marcy Galbreath's Spring 2014 ENC 1102

Overview

As a college student, I can already say that I have worked not only one, but multiple part-time jobs. No matter the employer or business, there was always the similar routine upon starting employment: filling out the tedious paperwork, meeting your new co-workers, and becoming familiar with the expectations of the workplace and employers. There are millions of workers everywhere on the hierarchy scale from part-time employees to CEO's. The question is how exactly are those employee/employer relationships formed through the various handbooks, reports, and revenue sheets? There are many components that go into forming committed professional relationships that are not only expressed verbally, but also through various written texts.

When it comes to the number of employees being hired on the weekly, daily, and even hourly basis among various companies, there is a great reliance on the contracts, agreements,

There are many components that go into forming committed professional relationships that are not only expressed verbally, but also through various written texts.

reports, and similar documents. These texts form a category of genres that are exchanged between the numerous levels of the workers' hierarchy, from employees to the main employers and heads of companies. In *Writing Genres*, Amy Devitt "return[s] to [John] Swales' basic insight, that genres function within groups to fulfill their communicative goals"(50), mainly explaining that texts aid in communication and exchanging information. These physical papers or electronic communications, along with agreements, statements and understandings, are the types of genres common in many workplaces. As Devitt states, "these genres construct a group of people and [form] one of the primary components of a discourse community to further its aim" (*Writing Genres* 37). This

statement explains the function of these genres, and defines that the members share a common goal, which is the main aspect of a discourse community. Some are convinced that genres are specific to certain occupations, agreements are implied in documents and contracts in various company positions, and obligations and demands are expected not only from the workers but also

from the company (Devitt; Karlsson; Tekleab and Taylor; Shore and Shapiro). There is already a wealth of information on genre theory and the understanding of terms and obligations in contracts as well as employee-organization relationships. I propose to highlight the dependence on these genres in terms of their importance in professional relationships among workers.

Review of Literature

The central idea is that genres are necessary and beneficial to a community, particularly occupations (Devitt; Devitt, Bawarshi, and Reiff; Karlsson). Devitt talks about the technical language that partially defines who is and isn't part of a community. Language use reflects members' knowledge of specific words and phrases. In *Writing Genres*, Devitt highlights the importance of these texts in accordance to grouping members together towards the community's overall objectives. She states that the genres "help people achieve their goals, and to encourage people to act in certain ways" (49). This means that these texts set standards and expectations for the members that incorporate them into their job. Devitt also considers how genres are not only tools, but also a somewhat social instrument, writing, "People construct genres, but genres construct people" (49). These texts that get exchanged both affect and reflect how people react and respond to them. Karlsson also incorporates this social aspect by mentioning how in various occupations there are genres created by upper-level members and then passed down to employees. She provides an example of a carpenter filling out forms daily and providing documentation that wasn't deemed useful for the intended work. One of the workers Karlsson interviewed saw this as being somewhat unnecessary, stating, "Carpenter and his colleagues had not thought much about why and for whom they were filling the details in, other than to get paid" (Karlsson 70). This reflects a misunderstanding and lack of communication between the two sides and the overall relationship that exists. In large workplaces, keeping everyone informed is a key to success. It also backs up the claim that genres are not just tools that members use, but more integrated into the social aspects that define the particular group. The amount of communication and information exchanged is the cause of the level of success in professional relationships.

Another key concept introduced by Gillan, Hartzell, and Parrino as well as Tekleab and Taylor is the idea that terms and contracts represent obligations both the employee has to the organization and also the organization has to the employee. When an employee enters a workplace and becomes part of the community, there are documents that must be signed and terms to agree on. Gillan, Hartzell, and Parrino present the example of a CEO entering a firm and depending on the contracts that are presented to her. The authors describe how she needs to perform and the expectations for her overall job performance. They further note the different advantages of implicit (verbally agreed upon) and explicit (written) contracts and the consequences of each. The advantages of explicit contracts include being more dependable than simply verbally agreeing on things. Further, the evidence provided by Gillan, Hartzell, and Parrino of the number of firms using explicit documents as opposed to implicit documents is surprisingly few:

In 2000 less than half of the firms in the S&P 500 had a comprehensive written (explicit) employment agreement (EA) with their CEOs. The other firms had either no written agreement at all or agreements that covered only limited aspects of their relationship with the CEO. (1629)

Having documentation of contracts and written agreements is necessary for important positions in a company such as the CEO. When there are only verbal agreements, there isn't full documentation, which can lead to future misunderstandings and major consequences. Most of us have experienced times when someone tells us something important and it's still difficult to remember each word that was said. This all relates to the company's level of management and confirmation of a worker's responsibilities. This reflects how necessary and beneficial written texts are to a workplace.

Tekleab and Taylor build on Gillan, Hartzell, and Parrino by discussing the primary points of the levels of agreement that are implied in contracts and agreements. The significance of any misunderstanding may lead to conflict or violations, whether from the employee's or the organization's side. It is important that both sides understand the responsibilities stated in contracts and agreements. The higher authority, especially, should take the employee's perspective into consideration and guarantee that new and existing members understand and comprehend the use and importance of the genre in question. Also, the more information exchanged and shared between manager and employee, as stated by Tekleab and Taylor, "should enhance their agreement on reciprocal obligations within the employment relationship" (588), meaning there is a level of dependence on each side of the relationship. The more successful these relationships, the more successful the workplace and company is.

The last major theme to consider is the importance of the integration of the employee-organization relationship into the workplace (Masterson and Stamper; Sturges et al.; Shore and Shapiro). Masterson and Stamper emphasize that how the worker is treated and respected stems from the amount of communication in the workplace. More communication produces positive and successful bonds between the employee and other workers. Also, employees have certain demands of the company, and, as Masterson and Stamper write, "are entitled to basic rights (e.g. pay, safety protections and owe basic obligations back to the organization" (474). These rights are agreed upon when becoming part of a company. This ties into Sturges et al.'s stance on how a company's management works and its relationship with the overall treatment of its workers. If there is ample dedication, communication, and information exchanged regularly, the relationship among employees and employers is enhanced. Shore and Shapiro discuss the psychological aspects of the effect of the company on the employee, stating, "[T]he type of employment relationship adopted by organizations has an effect on the firm performance—an organization-focused approach yields the highest performance levels" (446). So not only do these relationships benefit the employee, but the company as well. When there are workers communicating alongside the frequent and constant exchange of information, this in turn creates a productive and flourishing company.

While genre theory, agreements and understandings in contracts, and employee-organization relationships have been the topics of previous research, there is still not much known about how the integration of these specific genres in workplaces among hierarchies of workers form these employee relationships. Genres are mandatory and necessary to all discourse communities that share a common goal and aim. Workplaces that include employees and employers as well as superiors are examples of this type of community. The texts, such as contracts and agreements, include the specific terms and conditions that hired workers need to adhere to. These genres are social tools and are integrated in workers' tasks, reflecting the amount of information exchanged and resulting in increased communication. Based on my findings of necessary incorporation of written texts in the workplace, I would like to emphasize how influential the exchange and use of these genres is in shaping workers' professional relationships. Genres are truly vital and important in the workplace, and I believe their usage should be seen as a positive aspect in a community. In the specific instance of workers, the exchange of genres is beneficial to the overall performance of a workplace. In my future research, I will further my findings of how genres affect and form the relationships within workers in a company.

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Caroline Halik

Caroline Halik is twenty years old and a sophomore at the University of Central Florida. She was born in Montreal, Canada and moved down to Orlando at the age of three. She has lived in central Florida for most of her life and UCF had always been her dream school. She is presently pursuing a major in Business Administration with a minor in History. She is a hard worker and is constantly working multiple jobs at different locations to gain experience in the workplace. She truly believes that being successful stems from being determined, motivated, and passionate.

Writer's Statement about "More than Just Pieces of Paper: The Role of Genres in Professional Employee/Employer Relationships"

CAROLINE HALIK

As a freshman at the University of Central Florida taking ENC 1102, I shared the common idea that research papers aren't typically the most enjoyable part of the college experience. As a result of this, I needed to choose a topic for this paper I would be greatly familiar with. I personally know that writing about a topic that I can't dedicate 100% of myself into would be a struggle in producing twenty plus pages. I had concluded that there wasn't a lot of previous research on the business aspect of genres as well as relating to forming business relationships. In this research paper, I aimed to fill the main gap of the importance of genres in the workplace and their effect on forming business relationships. There can be further research done on this topic and maybe even resulting in a larger scale and lengthier paper.

I first got interested in this topic and chose to write about it when I had realized I am not so familiar with genres in the workplace. Having worked multiple part-time jobs in my life, and presently being employed at three different workplaces, this topic was of great interest to me. Not only that, but I am pursuing a degree in business and working towards pursuing a career in that field. "More than Just Pieces of Paper: The Role of Genres in Professional Employer/Employee Relationships" was written for and aimed at a specific audience, generally all different hierarchies of workers. Most people have held at least one job, so the audience of this paper was greater than I had intended. This can be applied to workers from various different positions and workplaces, whether for a large company or a mom and pop shop.

Some of the implications and challenges I had faced while writing this paper related to broadening my topic on not just covering the retail workplace, which I was working at presently when this paper was assigned. But as a result of this, I gained much information and knowledge with what I was not familiar with. In terms of the interviewing process, limitations existed because of legal aspects on what could and could not be answered. For example, one interviewee declined to answer any of my questions because of liability to her workplace. This shows that I had to interview individuals that were not only comfortable answering my questions, but also complied with what information could be shared.

The main statement I was trying to highlight and make is that genres are found all around us, especially the ones that are found on paper and seem like there is no significance associated

HALIK | WRITER'S STATEMENT

with them. But this is not the fact because the gap I tried to fill is how these genres are formed and form relationships in the workplace. These various pieces of paper that we take for granted specifically shape and form communities all around us. Amy Devitt does a marvelous job in portraying the statement that communities are shaped by genres and vice versa. Most of us actually take genres for granted and don't appreciate them enough or see how powerful they are.

It is significant that genres exist in different forms whether physically or electronically. A piece of paper that is shared and exchanged within a community has a different meaning versus emailing an electronic document. This also ties into how often and the method of communication the members in the community reach out to one another. Then sharing those papers, and genres with others whether inside or outside of your community also shows its importance and usage. This can directly tie into how genres are a social tool and can link back to the title that they are truly more than just pieces of paper.

This assignment got me into researching a lot earlier in my college career and had the opportunity to delve into a topic that would be very advantageous to me. At first I was hesitant and not looking forward to spending a whole semester on one project, but the results definitely showed otherwise. Usually prerequisite courses such as ENC 1102 are seen as just another class to take in college. Fortunately, I found true meaning and a sense of accomplishment not only as a student, but also as a hard worker pursuing a degree in business. I learned that if you set your mind to an assignment and put all you have into it, you will be successful.

Digital Literacy and the Making of Meaning: How Format Affects Interpretation in the University of Central Florida Libraries Search Interface

KOMYSHA HASSAN

Produced in Jacob Stewart's Spring 2014 ENC 1102

The library: an epic repository of knowledge and information that has endured for centuries. Individuals of all ages have come to these hallowed corridors for enlightenment and discovery, borrowing fragments from so many different sources in order to create their own pieces of work. Work that may one day, too, find its rightful place alongside the pages that once served as their inspiration. Over the centuries, libraries have endured, weathering a diversity of tumultuous events. As such, they have also eased into the 21st century with an embracing, if awkward, welcome. The newest reincarnation of the library has been its modern, digital counterpart—a repository of a different kind that promises to be the grandest collection of knowledge ever put together. Digital collections can be truly vast, encompassing thousands of journals, periodicals, and even e-books, that no library would entertain indexing—and with a growing percentage of authorship taking place in digital spaces, print media can no longer stand alone. Experts in the field of library sciences are at odds on how to better implement digitization and to what extent; however, there is no debate with regards to its necessity. This digitization is, in fact, well under way and has been for quite some time.

We live in an increasingly digital world where a great percentage of our textual production and consumption (reading and writing activity) occurs in digital environments. Clive Thompson, whose book *Smarter Than You Think* examines authorship in the digital age, estimates the amount of online composition as more than 3.6 trillion words daily, or the equivalent of 36 million books *every day*. To provide a better perspective, Thompson writes, “The entire U.S. Library of Congress, by comparison, holds about 35 million books” (256). Libraries have thus joined the digital realm, and with that their overall collection has grown substantially. Each library now has its own section for digital collections where you will find plenty of otherwise print-based publications in digital format. According to research conducted by the Association of Research Libraries, digitization of library collections, or the process of creating a digitally available copy of published works, is no longer the job of major library institutions alone. This practice is gaining prevalence in libraries of all sizes, both public and private. The result has been unprecedented access to vast collections previously unavailable to the browsing masses, and even greater access to general collections, at the

tip of one's finger.

All this modernization of the venerable library appears to be most beneficial; however, the wide-reaching implications of such a significant undertaking must be taken into consideration. What has made the library so remarkable is not simply its collection of knowledge, but its means of accessibility to that knowledge that make the library a vast repository open to all and available to all. In general, no special literacy is necessary to browse through its collection or stumble upon epic works of intellectual enlightenment. Random, serendipitous discovery is more the rule than the exception. Within digital environments, however, means of access change. Browsing, a term so synonymous with a library's books, has been usurped by digital terms to convey a more pointed search for a target rather than the casual scanning of material. Search interfaces are our reference desks. Like little e-librarians, they must interpret terms we input in order to provide relevant matches. But these librarians are one-dimensional and cannot know any more than what you allow them to know through a few chosen words about what you hope to find. One-dimensionality in this sense arises from the fact that you, as a user, are its source of information on what can and will be retrieved. Unlike more complex web search engines like Google, library database searches do not collect user information and track their behaviors in order to build complex profiles on the kinds of material a particular searcher may be seeking. The keywords a searcher inputs limit the extent of the information received by the user.

These considerations are of great consequence to what exactly we *can* access, and what limitations exist on the library experience in the digital realm. Whether a search interface is used to locate your object of interest or an actual, physical librarian, your information is processed through a mediator, and thus the mediator becomes an important part of the result. The knowledge, expertise and perceptiveness of your librarian come into play when he or she stands as the mediator, acting as the bridge between you and what you seek. In the same way, accuracy, relevance, and—in the digital realm—speed, govern interaction and results when using a search interface. Both exert influence over interpretation of those results, but digital formats in this case rely entirely on user input. Thus, the receipt of information itself is affected by how it is processed and what conduit was used to access it. However, the manner in which it is received is also worth noting.

Possible influences upon information interpretation have garnered much interest in literacy and writing studies. Gail Hawisher and Cynthia Selfe conclude that digital literacy is shaped by “social contexts; educational practices, values, and expectations; cultural and ideological formations like race, class, and gender; political and economic trends and events; family practices and experiences; and historical and material conditions—among many, many other factors” (644). Ingrid Hsieh-Yee, a library information scientist, argues that the degree of an individual's expertise in searching and in utilizing digital interfaces equally affects the way results are achieved and subsequently processed for re-purposing, stating that “findings on the role of subject knowledge, suggest that experienced searchers knew how to cope with their deficiency in this area” (169). While plenty of research is available on how means of access affect information receipt, less attention has been paid to the more critical question: how do these changes influence the interpretation and utilization of the information? How such digital formats affect the meaning constructed from the results is what I wish to examine in this paper.

Literature Review

In this section, I will discuss briefly the theoretical basis for some of the concepts that are used throughout this research which have provided direction and a framework for this particular study. Digital literacy, as discussed earlier, has become a major component of writing studies, and new concepts have emerged about the varied influences of our interaction with digital material. Before addressing digital environments more specifically, however, the concept of construction of meaning needs to be more fully understood. For that, I have relied heavily on a few insightful works

whose conceptual breadth allows for further-reaching implications. James Porter and Nancy Spivey both have addressed construction of meaning in similar, if slightly different, terms. Spivey approaches the literary spaces we interact with as a conglomeration of workspaces that are mutually influential, as both the reader and writer exert influence on one another. This is captured in a brief interpretation of authorship, wherein Spivey posits, “What I present reflects my construction of an author and his or her work. . . . The ‘author’ serves as a means of classification and is a kind of projection of the various connections we make and the commonalities we see” (28). Spivey continues, “When an author is cited, my own readers are cued to bring their own constructions of that author and that text to bear, even though I provide guidance for the sort of selections and inferences that they might make” (28). Here, Spivey suggests that the way information is presented influences the audience in a certain manner, but an audience’s interpretation is the final influence that constructs what that piece of information really means.

Porter enriches Spivey’s view with his concept of intertextuality, arguing that “ever and always, texts refer to other texts and in fact rely on them for their meaning,” suggesting that all texts are interdependent (87). He views the construction of meaning as heavily dependent on other literary influences and further explains that “we understand a text only insofar as we understand its precursors” (87). Influence from the intertext affects the meaning for both the writer and the reader extending that influence to the final interpretation. Exposure to a variety of texts is critical in shaping creative genius, a term which Porter is skeptical of, preferring instead “creative borrower” in an ode to the true skill of a writer’s creativity: borrowing from so many other writers and texts to create a single cohesive work. In that vein, we must assess what governs access to those critical sources of information, including environmental, social, and economic factors. Hawisher and Selfe’s research captures this intersection well through the term “cultural ecology,” with the authors stating that “the specific conditions of access have substantial effect on people’s acquisition and development of digital literacy” (644). Taking into consideration these numerous influences, Hawisher and Selfe conclude that “access is a much more complexly rendered social formation than we have heretofore recognized” (673).

Hawisher and Selfe’s work offers a good point of transition to construction of meaning in the digital environment, as it addresses digital spaces specifically within the broader context of literacy development. The “cultural ecology” of digital literacy acquirement is one that creates very subjective, experiential interaction with literacy. Levels of accessibility cannot be measured in the same way for different individuals. Access to a certain portal does not mean that it can or should influence the user in the same way. It is, as Hawisher and Selfe suggest, “the specific *conditions* of access (and the timing of these conditions) [that] seem to be important in determining when and how people develop effective sets of technological literacy skills—or, indeed, if they choose to do so” (673, emphasis in original). Digital literacy is not a skill that we can choose *not* to acquire in this day and age, but how we possess it and the ways we utilize it are factors that also determine what we make of information received through that particular medium.

In examining factors of influence on access, and more importantly literacy, we turn to Hsieh-Yee’s study of novice and experienced searchers to determine whether digital, and, more specifically, search literacy level are a factor in facilitating a successful search. The study was conducted with 32 “professional” or experienced searchers, and 30 novices; the purpose was to identify whether search experience and subject knowledge made a difference in the results obtained and the success of either group. The data from the study showed that experienced searchers were more successful in obtaining relevant results regardless of subject knowledge, and that they did so faster when the topic was familiar (167). The study further determined that novice searchers did not change their tactics when confronted with topics they were unfamiliar with, and that they relied less on usage of varied terms and thesaurus assistance in comparison with experienced searchers (167). On subject knowledge, Hsieh-Yee comments, “The most intriguing finding about subject knowledge, however, is its lack of effort on novice searchers. Data showed that

no matter which topic was searched, novice searchers displayed no difference in their use of search tactics selected for this study" (169). The author goes on to suggest that searchers "need to have a certain amount of search experience for subject knowledge to have any effects on them" (169).

The findings from Hsieh-Yee's study have strong implications on the type of ability that is needed to gain access to information from a search portal. Access here is governed by factors beyond the cultural ecology of the user and their degree of digital literacy in general, but also modal literacy in search tactics and knowledge of the subject being searched. It is not sufficient to be digitally literate, but to be literate in the effective use of search functions and terms. These findings show that search is a more complex act than simply the entering of a keyword or search term, and that many outside factors, unrelated with the search functionality, determine the kind of information that is produced. This issue becomes clearer when the complexity of retrieving information from a digital portal is examined, this time from the algorithmic, computational end. In "A Taxonomy of Web Search," Andrei Broder presents some difficulties in the processing of data entry, and how often what the user intends is not what the search function provides. Broder classifies searches as one of three types: navigational (the intent being to reach a certain site), informational (to acquire some information presumed to exist), and transactional (to perform a web-mediated activity). Though these search determinants are broadly placed, Broder suggests that there is no way for the system to determine "the need behind the search."

The accuracy of search results is in and of itself a matter of individual search systems. Each search provider has their own algorithm that is used to try and mitigate the effect of what I refer to as "intention-blindness" that is inherent in digital systems. This also suggests that each search system brings along with it a unique set of characteristics associated with its environment and sponsors. Broder submits that "human-computer interaction, and the cognitive aspects play a significant role" (4) in the web context and recognizes that this is "a rapidly changing landscape" (8). However, he concludes that for search interfaces to be most successful they will need to "deal with all three types" of queries, instead of interpreting the majority as simply informational, which the data determined, had made up less than 50% of total queries (9).

So far we have looked into how the individual's literacy, authority, and authorial capacity is shaped and influenced, and ultimately how these same factors affect the seemingly inanimate digital environment. Each specific data set and research effort creates a picture of how meaning is constructed and the individual influences on that process. Even in the language of the machine, the making of meaning is a critical element of how it provides answers to our queries. But beyond that, a final determinant of meaning is that of the interface itself. This simple portal that we recognize as a means to an end, barely noticing it beyond that, could well be dictating how researchers make moves within its space and, most importantly, what they get out of that interaction. In "Rhetorical Situations and Their Constituents," author Keith Grant-Davie examines this relationship between user and textual environment, which for our purposes may be digital or otherwise. Like Porter, Grant-Davie finds plenty of intertextual context for the development of certain rhetorical moves and the manner in which they are used. Again, the imperceptible and the implicit are most pervasive. Like Spivey, Grant-Davie finds construction of meaning a conditional relationship between input and output—author and reader, or in the concept for this paper, portal and user.

Grant-Davie provides a framework for his concept: the rhetorical situation. While he is not the first to suggest such a rhetorical construct, he has framed it in a unique and accessible manner that I find most relevant to this particular study. The rhetorical situation, in Grant-Davie's terms, has four constituents: exigence, rhetor, audience, and constraints. Though the first three are most likely familiar to the reader, constraints is one that may require some further defining. Grant-Davie refers to constraints as "factors in the situation's context that may affect the achievement of the rhetorical objectives" (111). Constraints are not necessarily a bad thing; they may be positive constraints, limiting contexts or frames in such a manner as to serve the rhetor's ends. He offers that rhetorical situations should be examined "as sets of interacting influences from which rhetoric arises, and

which rhetoric in turn influences" (104). Going beyond that, Grant-Davie sees rhetorical situations as complex, even compound, stating that "exigence, rhetor, audience, and constraints can interlace with each other, and the further one delves into a situation the more connections between them are likely to appear" (115).

Understanding the rhetorical situation is critical in understanding how an interface functions to influence its user. What moves does the rhetor (or rhetors) execute in order to accomplish his or her goal? And, more importantly, what exactly *is* the rhetor's goal? Here, rhetor is indicating the designer(s) or creator(s) of the library search interface. The exigence behind an interface is the primary determinant of how that interface will appear to its relevant audience. Finally, what constraints surround the use of a certain interface? In the same vein, we can also ask what is the audience's exigence—their need—in accessing that search function. What are the constraints that we have by now learned affect an individual's ability to access and use that interface effectively? Hsieh-Yee's study would suggest that digital literacy and search literacy along with subject knowledge are important constraints upon the successful utilization of a given search

function. And, even more fundamentally, Hawisher and Selfe's research suggests that the "cultural ecology" of one's literacy development is an equally critical constraint upon an individual's interaction with the digital search interface. A keen rhetor must take these elements of audience into consideration if he or she is to successfully manipulate the rhetorical situation and respond to the exigence of the search page.

What these authors collectively suggest is that meaning is constructed way before we arrive at the interface from which we will begin a search.

I find it necessary to also briefly introduce another author whose research has been enlightening in as far as the sources, influences, and channels of meaning making. Eminent literacy researcher and scholar Deborah Brandt's piece "Sponsors of Literacy" delves into the concept of literacy

sponsorship via an expansive, ethnographic study. Brandt finds sponsors taking on many shapes and origins, such as "relatives, teachers, priests, supervisors, military officers, editors, [and] influential authors" (335). Beyond individuals, sponsors may be institutions, as well as events and experiences (339). Although a correlation can be found between Brandt's and Hawisher, and Selfe's research, Brandt's particular frame of sponsorship—even the term itself—is very useful in interpreting those background influences on the creation of meaning. One area of Brandt's work that will be revisited later in this research is well-summarized in a quote describing sponsors as entering "a reciprocal relationship with those they underwrite. They lend their resources or credibility to the sponsored, but also stand to gain benefit from their success" (335). This concept plays a role in understanding some elements of purpose and support when considering the roles of the rhetor and exigence.

Finally, a work that has exerted an influence on my own thinking in approaching this research and that I find quite powerful in its ability to connect the concepts discussed thus far is Cathy Davidson's book *Now You See It*. This particular work is relevant to my research not only because of its brain-science approach to our interaction with digital environments, but because of the extensive work the author does showing the complex rhetorical moves that are made in order to influence an audience, and how these influences impact the meaning extracted from the situation. Davidson focuses on "attention-blindness" as a phenomenon only exacerbated by the digital world which we now occupy, writing, "[W]e are in a transitional moment. We are both adopting new information technologies all the time and being alarmed by them" (16). Davidson continues, "How we perceive the world, what we pay attention to, and whether we pay attention with delight or alarm are often a function of the tools that extend our capabilities or intensify our interactions with the world" (16).

These tools that Davidson speaks of are very much the same ones that, in differing terms, Hawisher and Selfe, Porter, Broder and Hsieh-Yee, speak of. They determine the means of access and control the production of information by allowing individuals at different corners of it to manipulate attention-blindness and interpret information in certain ways. What these authors collectively suggest is that meaning is constructed way before we arrive at the interface from which we will begin a search. Meaning is very subjective, yet it is also collective. Decisions are made that generalize conclusions for all and yet, inevitably, can only satisfy a few. The concepts put forth by the authors mentioned in this section are concepts that are neither unheard of nor individually remarkable. I would venture to say that many readers are already aware of them in one context or another. But together these concepts can shed light on a question that is less readily discussed: what influences do formats have on the making of meaning? And, more specifically, what influence does the University of Central Florida (UCF) Libraries search format have on the making of meaning?

Methodology and Data Collection

In order to investigate and examine my particular research question, I have chosen to conduct a rhetorical analysis of my research subject, namely the UCF library search function. I have considered other methods of ethnographic data collection; however, the constraints of time, accuracy, and accessibility on those methods led me to conclude that they may hinder or altogether disrupt my ability to conduct research and provide relevant and valid results. A rhetorical analysis involves the researcher critically examining a certain text, disassembling its cohesive parts, and determining how and why certain actions of speech or visual argument were made. In the case of the UCF library search format, the text here was a visual rhetorical argument, with each of its parts examined wholly and individually to determine its respective role on the page and identify the purpose for which it was placed. The rhetorical examination does not stand alone; it is framed by a certain theoretical lens that helps provide context to the argument I make and the conclusions that are drawn from the information. These lenses allow us to use well-established concepts and to stand on the firm footing of an existing wealth of research in deciphering and interpreting the information gleaned from the rhetorical analysis. It also serves to provide a framework to help conceptualize the data. I have already introduced most of the literature that creates these lenses through which rhetorical analysis is conducted in the literature review section above.

Ideas extracted from the various works that have been used to interpret my data are included in this paper. In addition, since the physical search interface is the subject of my research, commentary and analysis in many cases can be readily observed through viewing the page or using some of its functions. I have also conducted an extensive interview with a UCF research librarian, asking questions about some of the aspects of his specific interaction with the library search format and utilization of its functions. The input from the librarian is helpful in broadening the research perspective to encompass a professional viewpoint of using the library search function and what factors may affect its utility. It is, however, important to note that this is a single case study from one librarian's perspective and therefore no broader generalizations could be drawn from this particular data, neither on librarians in general nor for UCF librarians more specifically. The questionnaire sheet can be found in the appendix.

Finally, I will include some of my own observations in the course of using the UCF library search function for the purpose of this research. I have myself taken a single class of library research methods in conjunction with my Composition class, which was very helpful despite the fact that I was already familiar with the concepts discussed. I had also done a few hours of tutorials on the function and navigation of the UCF library search for the same class. This experience was instrumental in creating my individual identity as a researcher, although I identify as someone who is simply using a search engine. The realization that such a specialty affects the success of my own interaction with the interface helped initiate my interest to delve deeper in this subject.

Overview of Search Page

Let us briefly overview the elements of the UCF library search page. The search page contains four major elements immediately visible, placed as individual pieces on the page. The central two, and most visually fixating, are the large banner header and the OneSearch box immediately below it. Less significant in size or distinct in appearance are two bars on each side. To the right, six different buttons appear in plain text, with the various other modes of search function the library has available, including the specific articles and database and books/catalog search functions. The “Ask a Librarian” button is also located among the six buttons. On the left bar, the library hours are posted, also in plain text and regular typeset with emphasis made on the weekday hours. These two are not linked and do not direct the user to any other location. However, a small “more” link is located towards the bottom that navigates the user to a page giving extended information on operational times.

Garnering the most attention at first is the image-transition banner, with its picture format and extra large, colorized text. A quick glance at the images, however, allows the user to recognize that this is a non-function related element, displaying various shots of the library and informing of the availability of study rooms. Moving to the second largest and most prominent element on the page, we find the library OneSearch box. Besides the actual keyword entry box, three radio-buttons appear below allowing the user to select whether he or she is trying to initiate a search by keyword, title, or author. The keyword option is selected by default. Immediately below the term OneSearch are parentheses in faint gray text providing description for this search function: “Searches Catalog, Databases, and Articles.” Though the term OneSearch may be, to an extent, self-explanatory, no further information is provided that explains to the user what is the advantage of OneSearch versus, for example, any other search function the library has available, if indeed there are other functions available. There is also an advanced search link to the right of the search and clear navigation buttons for the search box. However, this too is presented quite plainly.

The page contains two more elements that, although clearly visible, are easily lost in the more interesting and immediately available elements taking center-stage on the page: a navigation bar at the very top of the page, and a footer. The navigation bar at the top functions as a pull-down menu when the cursor is placed over it, with regular typeset and simple text links to various pages such as “home,” “services,” and “about.” If the cursor is moved over those links, larger, pull-down menus and button links will appear with extensive navigation and search functions. The footer at the bottom contains ways to interact with the library on social media, as well as a few quick-navigation links, disclaimer page, and library news section. The overall color scheme of the page is one of light, unobtrusive hues and, apart from the header banner, contains no images.

Discussion

Several rhetorical elements of the search page are immediately identifiable. The centrality of the search function, the recessive nature of the side elements, and the mostly non-functional banner at the top all serve to emphasize the primary function of this page: the search. However, the page itself contains many different search elements. In fact, the entire right sidebar contains links to various *other* ways to search within the library. In fact, by definition, each of these search functions is more specific and specialized, hence more pointed in retrieving a certain result—assuming, of course, the user knows what he or she is looking for. And what if users do not know *exactly* what they are looking for? Equally, both the database and book catalog searches can help narrow results to more specific categories. But these functions are almost imperceptible, as the user's attention is immediately funneled to what appears to be the primary—and to the novice the only—search bar on the page.

Davidson refers to this as the “gorilla in the room,” where we focus on the one main element that is deemed, by navigational location and immediacy, most important or most relevant to the purpose of the search—blinded to all other functions. Our literacy in the digital intertext of search modality assists us even further in making that immediate move to the central part of the page, because we are used to locating the search function conveniently in that location in so many other search interfaces used on the internet. We are already primed, in a sense, to locate the search bar in that central location, and to ignore the usual filler that appears in various parts of the page that most often have no function in assisting someone’s research. Web literacy has taught us to ignore most side elements of pages because, beyond possible navigational qualities, they are mostly of no benefit to the user, and, in fact, are usually non-informational, such as solicitations.

In the preceding simplistic analysis of a single rhetorical element of the page, we were able to demonstrate that even users with good, and perhaps even extensive, digital literacy could be influenced by a page’s format in several ways, and that this influence may not be entirely beneficial to the user’s goal. But, if the function of the page is to conduct a search, what then is truly significant about this particular rhetorical move—the centrality of the primary search function? The question is not whether the search functionality of the page is readily accessible and central to it, but more so why this *particular* one has been pre-selected as the primary search function to which a user will most likely navigate. In that pre-selection, the other search elements that may be more relevant to a given searcher’s query are ignored, or possibly not seen. The rhetor’s exigence, to use Grant-Davie’s terms, must then be examined and reviewed in relation to the audience’s purpose in accessing the page and, more specifically, who that audience is.

Because the audience for the UCF library search page primarily consists of students, their perspective queries are more than likely academically related targets, such as a journal or a book related to a homework assignment. Generally, students tend to possess a few characteristics: young, digitally literate, and likely still learning about the subjects they are researching. These specific audience characteristics are ones that a rhetor must take into consideration when developing a space that successfully interacts with them. Knowing this audience is young, digitally literate, and still learning, we could infer that this audience wants quick access and response (young), places importance to certain parts of the page and pays attention to those parts in particular (digital literacy), and is not necessarily aware of what in particular they are looking for, and if they are, where exactly to find it (still learning). To satisfy an audience with these factors, the interface must be simple, focused, and broad in accessibility and results. Note that the “keyword” query option is selected by default, assuming that the purpose of a search is to narrow a topic, rather than having a specific one (e.g. title or author) in mind.

Not being a particularly savvy searcher, my personal observations using OneSearch in this manner are interesting to note. Though I was particularly aware of the subject matter I sought, I did not have particular articles or books in mind. Instead, I was searching for existing research and published work on a specific subject of interest. Finding relevant information was difficult. The significant number of returns to my queries had not provided specific responses that were relevant to the particular search target. I used simple parameters to limit the returns in the “Advanced Search” function of OneSearch. However, the accuracy of the results, though less numerous, was not significantly improved. Instead, the diversity of returns that included some of the terms entered led me to look into several other avenues of research and subject matter that were, on occasion, far removed from the original search target.

Having been made aware of the database search function through my course, I used that next. Though I did not know which database was most appropriate for my search, I selected a few relevant ones, so far as I could identify them. I also entered simpler keywords since I did not have to include terms that limited the focus of search to a general topic area as the database function already did that. The returns were significantly more accurate, with results mostly in line with the specific search target. In a final observation of comparative search methods, I consulted with a

librarian regarding the same topic search, asking for assistance in finding relevant journal articles or books. Though my inquiry was the same, no keywords were given to the librarian. Instead, I described with some extensiveness what the subject was, providing background and anecdotal information. The results were even more accurate and relevant, providing more specifics than the other methods used when searching on my own.

Clearly, the exigence—the need—a search page responds to is to provide prompt and accurate results. If it fails to do so, it fails its single function and users would discontinue using it. This cannot be the purpose of the rhetor in directing users to OneSearch. Revisiting Broder, we understand that search functions can only deduce limited value from keywords towards a certain query, and that each search system uses their own algorithmic formulas to determine search results. Thus, we must also consider constraints of sponsorship, in the concept of Brandt, and the environment on the search format. Sponsors, such as UCF and the database engine that operates the search, EBSCO, are two factors among many in determining the databases available for query and the prioritization of search results. Environmental factors such as the size of the university and the diversity in fields of study and overall student body at UCF affect the type of interaction that the rhetor would find most appropriate and effective.

Conclusion

We can conclude from the research conducted in this study that, indeed, the UCF search format influences the way in which we interact with it and submit our queries through its portal. But how that affects the meaning we make from the results is the ultimate question. The interaction and response phases say a lot about how we think of information access in the digital library age versus the age of the traditional library. The essence of “quantity over quality” seems to be a theme in digital spaces: higher returns are more valued, perhaps, than accurate ones. And what do simplistic search interfaces say about the *kind* of information we seek? Are we looking for a fast resolution to a problem, to quickly find a study subject? If searchers do not know what they are looking for *exactly*, does that also mean that they do not know what they seek in general? In my own observation, I had a very specific target subject and I was familiar with the subject matter. Hsieh-Yee's study results, however, indicate that a searcher's subject knowledge does not influence effectiveness if they are not also experienced searchers.

What if a very different search interface was used, one that was complex rather than simplistic but that would allow users to interpret the best way to get results to their queries? Interestingly, not many would use it. The UCF librarian I interviewed explained that, in his personal experience, most questions asked were simple but marginally more specific, and were perhaps best found using a subject database. The librarian observed that he rarely uses OneSearch, not because of its quality as a search portal, but because this librarian's queries are never so general.

My research conclusions here are not a critique of the UCF library search's effectiveness per se, but that of the digital environment that surrounds it, and which it is a part of. The format of the UCF search page reflects a certain digital tradition in which the traditional library does not belong. In their study of computer mediated communication in academic settings, Jane Mitchell and Gaalen Erickson noted that such communication has “far-reaching consequences for academic practices, particularly for ways in which knowledge is constructed, communicated, represented, used, learned, and critiqued as part of the processes of research and pedagogy” (21). These consequences, Mitchell

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and Erickson later conclude, have the potential to “reconfigure the relationship between knowledge and language through how we read, write, and think” (38). That reconfiguration of meaning through the search portal is well under way.

Though inadvertently, the search page encourages this practice: the superficial pursuit of a random subject to complete a task, rather than an in-depth pursuit of a specific area of inquiry in order to gain a fuller understanding. In framing our query from the outset within this context, the search format in and of itself affects how we interpret these results, leading to the discovery of a quick answer or a single part of a greater body. Because the digital space is so much more prevalent and pervasive, we are much more likely to seek it than, for example, a librarian. The answers seem to be at our fingertips and they do not inquire or push us to questions of deeper meaning. But we miss a point that keywords cannot encompass—the nuance of meaning, the inflection, and anecdotes that communicate what we *truly* seek. There is no “you know what I mean” in digital interfaces. The accuracy gap that I encountered between the improved database search and that of my librarian query has less to do with the librarian's advanced knowledge than their ability to process the whole of my query and then utilize their specialized knowledge to target an appropriate search function.

There is no doubt that information and knowledge is available, but access to it is what is inconsistent and the way we interpret it, as this research has found, is influenced by the portals we seek it through. Our exposure to the intertext, too, is affected, changing from open-ended inquiry to targeted keyword search. In the case of the latter, we do encounter many texts, possibly more than those we would on a library's shelves; however, our inquiry is focused on matching results. Results that appear to be inconsistent with the query often end up disregarded, instead of piquing interest.

Davidson finds that we need to update our manner of interaction with the digital environment so as not to exacerbate attention-blindness, but to seek complex questions in a way that will allow us to find complex meaning. To gain the most from our digital world, we must make changes to the way we interact with it, rather than trying to fit old ways of information-seeking to new rules of information retrieval. As Davidson suggests, “learning, unlearning, and relearning, require cultivated distraction, because as long as we focus on the object we know, we will miss the new one we need to see” (19). More research will need to be done to record and address the influences of search portal interfaces on the meaning of the results and the gaps that exist between our understanding of traditional and digital information access. Digital libraries, however, are not a thing to fear but rather to embrace. Digital collections will be just as great as their print counterparts, and perhaps greater as their proponents would suggest. It is simply a matter of learning, unlearning, and relearning.

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Komysha Hassan

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Appendix

UCF Librarian Questions

This is a brief questionnaire about the UCF Library search function, for the purpose of a research paper assignment. Replying to this questionnaire is entirely discretionary. You may at any time refuse to answer a question or discontinue the interview without consequence. You are not obligated to answer any or all of the following questions, or others that may arise from discussion surrounding them. This paper is not intended for publication; however, in the event that the author does choose to publish his or her research, you will be notified for approval prior to publication. Your participation is anonymous and you are not asked to give any personal information, including name, for the purpose of this interview.

1. How often do students seek your assistance in finding a text in/from the library?
2. Do you use OneSearch?
If no, why not?
If yes, how often?
3. When conducting a search, what function do you seek most often?
4. How would you generally interact with the search interface?
Go directly to the 'advanced' function?
Use a Boolean type search?
Use general, relevant terms?
5. What do you find as the best search feature?
6. What is the worst feature?
7. How would you compare general web search engine function to library search?

Writer's Statement about "Digital Literacy and the Making of Meaning: How Format Affects Interpretation in the University of Central Florida Libraries Search Interface"

KOMYSHA HASSAN

As a multilingual writer, language and interpretation are a very conscious element of my daily life. In the digital age, we are surrounded with new forms of communication—languages—and unique contexts for interpretation. We may not think about it, but we all possess a diverse number of literacies that we use on a daily basis. This consciousness has guided my interest in mediums of communication, and how they affect meaning and interpretation. I was set on the path of exploring literacies while still in my first English class at UCF: Dr. Steffen Guenzel's ENC 1101. Then, I began to embark upon a research project for my ENC 1102 class with Professor Jacob Stewart. The first step building towards the research paper was through delving deeper into genres as methods of communication. This really cemented my interest in exploring literacy across genres and the implications of digitization on preconceived notions previously built on textual-based literacies.

In the process of working towards a concrete research question, we took a two-week library sciences course as part of our ENC 1102 class. This proved to be a transformative experience, learning from a librarian firsthand what kinds of tools were available to a researcher through the library. The librarian guided us through the use of the library search and the various ways one may manipulate the search tool in order to find applicable results. This experience helped shift my focus more specifically to the library. I found it to be the ideal place to explore this intersection between textual resources (books on the shelf) and their digital counterparts. I also became very much aware of the constraints, both positive and negative, on access through that medium. Finally, during the development of my annotated bibliography and after conferencing closely with Professor Stewart, I was able to focus on a single research question: What effect does the UCF library search format have on the meaning we make from the results?

As my research method, I chose to conduct a rhetorical analysis of the search page, because other methods of data collection were not entirely applicable to this particular question. It turns out this was a unique choice and in need of being well-qualified. I focused on conducting my own

HASSAN | WRITER'S STATEMENT

primary research on the search page, and then using secondary sources to help me interpret my observations and allow me to draw some meaningful, research-based conclusions. I also conducted an interview with a UCF librarian to give me further insight into the professional perspective on my questions.

I felt my research was very productive, identifying a lot of elements that affected search behavior and thus the results obtained from the search. My work shed light on the power of small and seemingly inconsequential rhetorical moves in an online setting. I also sought to shed light on questions of access and control when it came to utilizing such tools as web search effectively. My research would suggest that, while we possess all the necessary tools to be successful in evolving digital environments, it is necessary to embark upon a conscious pursuit of acquiring and adapting the capabilities to operate in such environments so as to gain access to them in a full and meaningful way.

Although limited in scope, I believe this research has the potential for wider ranging implications in the fields of library sciences, literacy studies, and search technology. As we move closer to digitization of the library, it is prudent to explore the relationship between users and portals of access, and what influence do these portals exert on initiating and directing patterns of behavior in their spaces. I would hope that my research's invitation to deeper exploration entices interest among students of these respective fields and an appetite for continuation of this vital conversation.

The Rhetoric behind College Football Recruiting

KYLE COLTRAIN

Produced in Adele Richardson's Spring 2014 ENC 1102

Introduction

College football is one of America's most popular sports today. Revenue brought in from television deals and jersey sales is almost on par with the National Football League. How the players get to the vast stage of big-time college football has become of great interest to the general public, and every year this interest continues to grow (May 49). These athletes get to this stage because college coaches initiate searches to recruit the players out of high school. Recruiting, at its core, is like sales; a coach is trying to sell his school to a player. The sales industry is full of rhetoric, which can be defined as the art of effective or persuasive speaking or writing. Therefore, good recruiting relies on rhetoric. There are many questions that arise about the rhetoric of college football recruiting: How does a college coach recruit? Why is it so important to recruit? What brings in the players?

There has been quite a bit of research done on why college coaches recruit and the results have all lead to same answer: the better a team recruits, the more the team wins (Caro; Grant, Leadley, and Zygmunt; Langelett; Maxcy; Pitts and Rezek; Trent; Yanity and Edmondson). Even with a wide variety of research done, the conclusions all agree that there is a direct correlation between good recruiting and good football teams (Caro; Langelett; Trent; Yanity and Edmondson). When studies have been done to determine what the greatest attribute is in a college football coach and why some coaches get hired over others, successful recruiting was almost as important as a winning record on a coach's résumé (Grant, Leadly, and Zygmunt; Maxcy; Pitts and Rezek).

How a college football coach recruits is one of the most significant determinants in why a prospect selects a particular school (Bateman; Dumond, Lynch, and Platania; Klenosky and Troutman; May; Sigelman; Sulentic). However, there are many different styles as to how this recruiting is done (Dumond, Lynch, and Platania; Klenosky and Troutman; Sigelman; Sulentic). Some say that college coaches recruit in an extremely deceiving, dishonest manner (Bateman; Sulentic). Coaches have been known to give high school athletes false promises of playing time, money, and other benefits that never end up being given (Sulentic). Fortunately, this is not the only way college coaches do their job (Dumond, Lynch, and Platania; Klenosky and Troutman; May; Sigelman). Coaches spend a lot of time and effort calling, texting, emailing, and going to visit high school recruits in order to sell them on the particular university they are representing (Dumond, Lynch, and Platania; Klenosky and Troutman; May; Sigelman).

While previous research has established the importance of recruiting for college football programs, there has been relatively little research into the specific factors coaches use to promote their schools and the rhetoric that informs their pitches to student athletes. Researchers that have studied college football recruiting have pointed out that this is an area that needs much more attention (Klenosky and Troutman). My research is dedicated to adding a significant contribution to this discussion through the questioning of college football players that were top recruits, and

determining why they picked the school they did. After surveying a substantial number of players, I hoped to find a direct correlation between why they picked these schools and how they were recruited. This information is not only interesting to the college football fan, but can also be very useful information to a college football coach.

Methods

To answer the question “What works in the college recruiting process?” I determined the best solution would be to talk to a sample of college football players who have gone through the recruiting process. No one would know what works in recruiting better than players who have gone through the entire experience firsthand. Since I am a part of the University of Central Florida (UCF) football team, I had direct access to these athletes, and selected them for my analysis. I created a survey with six of what I believe to be the most essential factors a student-athlete considers when deciding between schools. The six factors were recent success of the program, proximity to home, relationship with recruiting coach, facilities, early playing time, and academic prestige. I asked twenty players on the team to rank these categories on a scale of one to six, one being the most important, six being the least. I knew that by doing this, I would receive a good understanding of the most important factors in the recruiting process.

Though the surveys would give a good idea of what worked in the world of college football recruiting, I did not want to end my research there. I believe this answer would have been too broad and left questions. After discovering what was most important, I wanted to privately interview three players from the sample to get a more detailed analysis about why they picked the school they did, based on the category I discovered to be most important through the surveys. For example, if the athletic facilities had turned out to be the most important factor after analyzing the surveys, I wanted to learn what it was about the athletic facilities that made them so important. I wanted to dig deeper than the simple response; I wanted to know why the greatest factor was so important that it determined where a high school athlete was going to spend his next four to five years playing the sport he loves. Therefore, after the survey responses were collected and analyzed, three separate interviews were conducted to get more detailed information on the topic. The questions were very open-ended; I was not looking for concrete facts, but rather a general idea of how the recruiting process went for these individuals.

There are some weaknesses to how I approached my research, though I tried to eliminate as many issues as possible. I believe my research would be more accurate if I had an opportunity to survey and interview more players than I did as well as players that attended different universities and played at different levels of college football. There is a possibility that all UCF football players share similar preferences that would be entirely different from another schools’ players. Unfortunately, I did not have access to players at other schools and could only interview UCF players. Nevertheless, I believe I did take full advantage of the resources I had at hand, which made my methods extremely successful for the purpose of this paper.

Recruiting, at its core, is like sales; a coach is trying to sell his school to a player.

Results and Discussion

Surveys

The results of the survey can be found in Figure 1. The leftmost column shows what factor is being tallied and the top row shows its ranking. The numbers in the chart are the number of votes

the particular category received for the particular level of importance. For instance, RC received fourteen votes as number one in importance.

	One	Two	Three	Four	Five	Six
Relationship with Coach	14	5	1	0	0	0
Recent Success of the Program	0	2	6	5	5	2
Proximity to Home	4	2	5	4	3	2
Facilities	0	0	5	5	4	6
Academics	0	5	1	0	6	8
Early Playing Time	2	6	2	6	2	2

Figure 1: Players Preferences

The results show that most of the categories are subjective based on preferences of the individual player. Some players are interested in the academics of a school, while others care more about how close it is to home. The results were fairly scattered for every category except for one: the relationship between the player and the coach recruiting him. This, above everything else, got more first importance votes by a significant number; moreover, it received five second-place votes. This was a significant finding in my research. One factor stood “head and shoulders” above the others, proving that the relationship between the player and the coach was the most important determinant in the recruiting process for the players in my sample.

Though the question of “What works?” may have been answered at this point, the details were still unclear and more research needed to be done. Although it is apparent that the relationship between the player and the coach is the most important element of the recruiting process, how a coach builds these relationships and wins the hearts of players is a whole different story: this is where the rhetoric starts to play a larger role in the college recruiting game. How can a coach get a player to trust and believe in him, and then use this to his advantage to persuade the athlete to choose his particular university? This is where my private interviews became important.

Interviews

The first player I interviewed just finished his senior season as a UCF Golden Knight. His name is Andrew* and he is actually from Orlando, Florida. Coaches from schools all over the country initially recruited Andrew. From Indiana to Texas to Florida, he had a wide range of colleges to pick from. When I first asked him what was most important to him in the recruiting process, he was quick to tell me that it was the coach who recruited him from UCF that made him to fall in love with this school. Andrew never knew his father, and when the coach recruiting him from UCF learned this, he started to call Andrew every night, really becoming a father-type figure in Andrew’s life. No other coach seemed to put in the effort to do this. The coaches from other schools maintained a strictly business-like relationship with Andrew. Andrew said,

The coach from UCF stood out the most to me because he treated me differently than all the other coaches. He would ask me how my day was, how my girlfriend was. He just really seemed to care about me more than anyone else. It wasn’t just about football with him; it was a strong bond. With that grew a great respect for him and I trusted him, so when he told me he thought UCF would be the perfect fit for me and that I would like it here more than anywhere else, I believed him and signed with UCF.

* Pseudonyms were used for all interviewees.

Andrew also told me that other coaches would “badmouth” the opposing schools recruiting him, which he found to be distasteful and turned him off those coaches and their schools. The other coaches only had conversations about football, and never asked how Andrew was doing in school or in life. It was all about the sport. They didn’t seem to want a personal relationship. For Andrew, UCF was a no-brainer.

The next player I interviewed, Connor, is going to be a senior this year and is projected to be a high draft pick in next year’s NFL draft. He was one of the top players in the whole 2010 recruiting class, and had an offer from almost every school in the country. Connor explained that it was the persistence of the UCF coaches that made him want to come to school here. He had offers from much bigger, better programs, but that didn’t stop the UCF coaches from trying, and Connor admired that. He said it was like UCF was “a little engine that could” type of program, and he wanted to be a part of it. No other team was as honest with him as UCF. He told me that the UCF staff would say, “We understand we are not the best right now. We’re not trying to sell you on something fake, but we believe that with you, we will get there.” Connor talked about how he loved that the UCF coaches made him feel like he was already a part of the team and would have an impact early on. They weren’t trying to sell him on something that wasn’t there; instead, they were honest and said they were going to get there through time.

Lastly, I conducted an interview with a player named Kevin. Kevin, like Andrew and Connor, had a large selection of schools to choose from. Kevin is not from Florida, though, but Philadelphia, PA. It shocked me that Kevin would travel so far to go to school at UCF when he had received several offers from competitive programs in the Northeast; some even more competitive than UCF. Kevin explained to me that his decision came down to Rutgers and UCF. Rutgers, at the time, was a much more competitive program, had tremendous facilities, and was a lot closer to home for Kevin than UCF. I was intrigued as to what persuaded Kevin to choose UCF over Rutgers. When I asked him, like Andrew, he said it was all about the coaches. When I went on to ask what was the difference in the coaches, and why UCF’s staff was so influential, he stated,

I just felt a really strong bond with, not only the coach that was recruiting me, but all of the UCF coaches. They talked to me more like a friend than an employee. I grew to be extremely comfortable with them and knew that I could see myself playing for them the next four or five years of my life. Rutgers did have the upper hand in facilities, uniforms, proximity to home, competitiveness, and seemed like a cooler school to me, but the coaches were strictly business and I just didn’t like that. At the end of the day, you spend a lot of your time with the coaches, so that was my deciding factor.

Kevin explained that UCF would call him every day, he would receive handwritten letters at least three times per week, and he would receive emails almost every day. Kevin went on to say, “Even though a handwritten letter is something so simple, it really showed they cared. It was more than just an email or a text.” In the end, it was a difficult decision for Kevin, but he explained that it seemed like it would be too much fun to play for the UCF coaches to pass up. He chose UCF and made it very clear that he has not regretted that decision since.

Analysis of Research

Based on the information I found through the surveys, it is evident that recruiting is an extremely difficult task. Every player is a wildcard—each is distinct and has completely different preferences and concerns when selecting the college of their future. Some players take a keen interest in how close the college is to their home, while some care much more about the strength of the academics or how nice the facilities are. At the end of the day, however, the relationship these players develop with the coaches recruiting them is the most important element in the college recruiting process. Of the players surveyed, 98% responded that the relationship with the coaches

was either the first- or second-most important determining factor; none of the other determinants even came close to being that important.

How this relationship is formed and what the coaches do to create these bonds is what I discovered through the interviews. It was apparent after the interviews that players out of high school are not looking for a coach that talks only about winning, or even football for that matter. Players are looking for coaches that they can look up to as a friend or mentor; or even, in some cases, as a father-like figure. Persistence and encouragement from the coaches show the players how much they care. To build these relationships, coaches have to spend a great deal of time calling, writing, and even visiting players. This type of recruiting can become very expensive, which is why more and more money each year is dedicated to recruiting by college athletic departments (Klenosky and Troutman; May; Sigelman). The more money a school has, the better chance they have at landing a recruit because coaches can make frequent visits and personalize their relationships (Sigelman). If they visit

the recruit more often, it will give the coach a chance to build a stronger relationship with the player and then be able to land the recruit. Coaches are also using social media as a huge recruiting tool with the popularity of websites such as Facebook, Twitter, and Instagram (Klenosky and Troutman; May; Sigelman). When coaches do this, it shows that they take an interest in what is current and important to the athletes in an effort to get the players to like and trust them more.

Conclusion

Although how nice a school is, how close it is to home, even how fancy its jerseys are all play a role in the recruiting process, in the end, it is most often the relationship between the recruit and the coach that determines the player's college decision. The answer to the question, "What works in the recruiting process?" is building a personal relationship with the player. Coaches don't need to lie to players with false promises of early playing time or wins, all they need to do is open up and make an attempt to build a strong bond with that player. Through this, the coaches have the upper hand in persuading the player to come to their particular college because the coach has earned the player's trust, which is the most important factor.

There is room for improvement and expansion with this study. I believe interviewing and analyzing other schools' players would give enhanced results. I do believe, however, that the results I found were tremendously substantial and take a step in the right direction to find out exactly what works in the world of college football recruiting.

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Kyle Coltrain



Kyle Coltrain wrote this paper during his freshman year at the University of Central Florida. Kyle is a business major from Carmel, Indiana. He is a football player for the Knights, and made the decision to attend UCF to follow in the footsteps of his father, Ted Coltrain, who was also a UCF football player. Along with Kyle's father, his uncle, Mike Dickinson, also played football for UCF. Kyle is currently living out his dream of being a UCF student-athlete and plans to attend graduate school upon graduation. One day he hopes to help run a business with his father.

Writer's Statement about "The Rhetoric behind College Football Recruiting"

KYLE COLTRAIN

The first day of the semester in ENC 1102, I was told that we would select a topic for a research paper that was to be used for the entire course. The topic had to be something current and had to be broad enough to research for an entire four months, as well as be able to correlate with rhetoric. Selecting the topic for the paper was the first and the most challenging part of the writing process for me.

Initially, I started my research with an entirely different topic in mind. I was going to write my paper on President Barack Obama's healthcare policy "Obamacare." This was a new and ongoing story which was to have an effect on me. Although I knew nothing about the policy and was not particularly interested in it, I figured there would be a lot of information pertaining to it and it would be a simple paper to write. I could not have been more wrong. After significantly struggling with the first two assignments, I met with my professor. We came to the conclusion that it was not lack of skill or understanding; it was simply lack of interest in the topic that led to roadblocks in the research and writing process. We discussed what my interests were, and with football being the most significant one, I pursued a topic in that field.

At first it wasn't easy finding a way to relate rhetoric to football. This took days of brainstorming, until I realized I was not looking at the term rhetoric at its core definition. I was thinking too much about it. Rhetoric can be defined as "the art of effective or persuasive speaking or writing," and as soon as I grasped that definition I knew I could relate it to the aspect of football. I determined my topic to be "The Rhetoric behind College Football Recruiting."

The audience for the paper was directed at anyone who was interested in college football and who wanted a "behind the scenes" look at how the recruiting process worked. I really wanted to capture this audience and make my paper stand out more than others that had been written on this subject. After thinking on it for a while, I decided the best way to go about this paper was not to look at numbers and statistics, but to actually talk with heavily-recruited college football players. I also believed that interviewing college football players who had been recruited would be the best way to give my paper a significant amount of credibility and give the most interesting perspective to the reader. I decided to narrow the paper to three players' points of view to allow a diverse perspective while still being able to go into the detail of the research.

In essence, this paper was a journey. It had its ups and downs, but after narrowing the subject to something that held substantial interest to me and stripping rhetoric down to its most basic definition, it was smooth sailing. Overall, I am very proud of the outcome of this research paper and hope everyone enjoys reading it as much as I enjoyed writing it.

INFO-1
Attachment E



SHOWCASE OF UNDERGRADUATE RESEARCH EXCELLENCE

CELEBRATING UNDERGRADUATE RESEARCH AND CREATIVITY ACROSS THE CURRICULUM



2016

THURSDAY, APRIL 7, 2016

PEGASUS BALLROOM
UCF STUDENT UNION

Welcome to the 13th Annual Showcase of Undergraduate Research Excellence.

The Showcase is a poster-based forum for University of Central Florida undergraduates to present their research and creative projects to the university community. Undergraduates from all disciplines are encouraged to present current or recently completed academic projects showcasing the diversity of topics, approaches, and interests at UCF. The Showcase serves as a resource for undergraduates not yet engaged in research and creative pursuits to learn how fellow students have developed their intellectual interests, current projects, and faculty connections. The Showcase also demonstrates to students, faculty, staff, alumni, and the Central Florida community that student research builds upon and enriches the UCF undergraduate experience. The Showcase is sponsored by the Office of Undergraduate Research, which is a unit of the College of Undergraduate Studies. For more information about undergraduate research, please visit **www.our.ucf.edu**.

The Showcase is part of the 2016 Research Week at UCF.

www.showcase.ucf.edu

UNIVERSITY OF CENTRAL FLORIDA | ORLANDO, FLORIDA

SHOWCASE OF UNDERGRADUATE RESEARCH EXCELLENCE

Celebrating undergraduate research and creativity across the curriculum.

OFFICE OF UNDERGRADUATE RESEARCH
COLLEGE OF UNDERGRADUATE STUDIES

ORDER OF EVENTS

STUDENT PRESENTATIONS (*Pegasus Ballroom*) 1:00–4:00 P.M.

FACULTY MENTOR OF THE YEAR (*Cape Florida Ballroom*) 4:20 P.M.

Student Undergraduate Research Council

REMARKS AND PRESENTATION
OF SCHOLARSHIPS (*Cape Florida Ballroom*) 4:30 P.M.

John C. Hitt
President

Elizabeth Dooley
Vice Provost for Teaching and Learning
Dean of the College of Undergraduate Studies

2016 UCF STUDENT RESEARCH WEEK

SHOWCASE JUDGES

The Office of Undergraduate Research is indebted to the following faculty for devoting a substantial amount of their time serving as Showcase judges.

Ahlam Al-Rawi	Laurel Gorman	Jonathan Powell
Claudia Andl	Florencio Hernandez	Silvia Pulido
Thomas Andl	Woo Hyoung Lee	Shawn Putnam
Cindy Bayer	Jana Jasinski	Susan Quelly
Kathleen Bell	Travis Jewett	Michael Rovito
Bill Blank	Bill Kaden	Herve Roy
Patrick Bohlen	Joo Kim	Bridget Rubenking
Bob Borgon	Viatcheslav Kokoouline	Anwar Sanmani
Lisa Chambers	Dmitry Kolposhchikov	Valerie Sims
Mathew Chin	Stephen Kuebler	Jacqueline Towson
Manoj Chopra	Mingjie Lin	Rani Vajraveli
Karin Chumbimuni Torres	Victoria Loerzel	John Venecek
Rosa Cintron	Caroline Marrett	Linda Walters
Leslee D'Amato-Kubiet	Taleo Mayo	Lei Wei
Kimberly Dever	Elizabeth Mustaine	Kerry Welch
Christa Dierksen	J. Thomas Owens Jr.	Chrysalis Wright
Joseph Fanfarelli	Anthony Pak Hi Kong	

SHOWCASE BENEFACTORS

Through the generosity of the following organizations and individuals, substantial scholarships will be awarded to students judged to have the best projects presented at the Showcase. The Office of Undergraduate Research and the planners of 2016 Student Research Week are grateful to these benefactors for their encouragement and support of student research at UCF.

We are especially appreciative to the **UCF Student Government Association** for its generous contribution.

UNITS AND COLLEGES

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Shannon Colon
 Mr. Richard Harrison II
 In honor of Dr. Jana L. Jasinski,
 dedicated Showcase judge
 for 12 years
 Aubrey Kuperman
 Colleen Marquart
 Kimberly Schneider

FACULTY MENTORS

The faculty is a university's paramount asset, and the Office of Undergraduate Research recognizes the following UCF faculty mentors who have advised, counseled, tutored, and encouraged students presenting at today's Showcase.

Kareem Ahmed	Seth Elsheimer	Stephen Kuebler	Mohtashem Samsam
Kelly Allred	Alvaro Estevez	Ariel Lang	Steven Saunders
Ahlam Al-Rawi	Luis Favela	Joseph LaViola	Anna Savage
Deborah Altomare	Ken Fedorka	Gary Leavens	Kristen Schellhase
Amanda Anthony	Cristina Fernandez-Valle	Ji-Eun Lee	Alfons Schulte
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Enrique del Barco	Jason Ford	Nichole Lighthall	William Self
Issa Batarseh	Maria Franco	Victoria Loerzel	Lawrence Shah
Matthieu Baudalet	Marcy Galbreath	Kevin Mackie	Michael Sigman
Jeffrey Bedwell	Luciana Garbayo	Kate Mansfield	Elzbieta Sikorska-Simmons
Steven Berman	Martha Garcia	Hansen Mansy	Valerie Sims
Richard Blair	Romain Gaume	Kim Manwaring	Pete Sinelli
Patrick Bohlen	Andrea Gelfuso	Carolyn Massiah	Aaron Smith
Clint Bowers	Ann Gleig	Artem Masunov	Eileen Smith
Martha Brenckle	Avelino Gonzalez	Fabrice Mathevet	Janan Smither
Candice Bridge	Laura Gonzalez	Pamela McCauley	Tara Snyder
Mary Ann Burg	Ali Gordon	Daniel McConnell	Mary Lou Sole
Angeline Bushy	Elizabeth Grauerholz	Stephen Medeiros	Lee-Anne Spalding
Giselle Carnaby	Peter Hancock	Piotr Mikusinski	Kiminobu Sugaya
Shannon Carter	William Hanney	Delbert Miles	Suren Tatulian
Necati Catbas	Erin Hanson	Doan Modianos	Laurene Tetard
Debopam Chakrabarti	Eric Hoffman	Karen Mottarella	Kenneth Teter
Ratna Chakrabarti	Bari Hoffman-Ruddy	Mustapha Mouloua	Jayan Thomas
Debashis Chanda	Richard Hofler	Daniel Murphree	Jacqueline Towson
Reshawna Chapple	Gail Humiston	Saleh Naser	Jennifer Toyne
Susan Chase	Jaehoon Hwang	Charles Negy	Anne-Charlotte Trinquet
Jason Chesnut	Woo Hyoung Lee	Mark Neider	Anca Turcu
Lee Chow	Boo Hyun Nam	Shuo Pang	Volodymyr Turkowski
Karin Chumbimuni-Torres	Peter Jacques	Christopher Parkinson	Dawn Turnage
Lucia Cilenti	Racine Jacques	Griffith Parks	Fernando Uribe-Romo
Alexander Cole	Bruce Janz	Daniel Paulson	Anna Valdes
Ilenia Colon Mendoza	Kelly Jennings-Towle	Carla Poindexter	Carlos Valdez
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Ronald DeMara	Jeffrey Kauffman	Amy Reckdenwald	Lori Walters
Weiwei Deng	Michelle Kelley	Debra Reinhart	Ze Wang
Kimberly Dever	Jennifer Kent-Walsh	Maria E. Reyes	Tracy Wharton
Donovan Dixon	Mercedeh Khajavikhan	Beatriz Reyes-Foster	Stephanie Wheeler
Aristide Dogariu	Saiful Khondaker	Martin Richardson	Grace White
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Adrienne Dove	Joshua King	Sherron Roberts	Lana Williams
Steven Duranceau	Stephen King	Kyle Rohde	Chrysalis Wright
Dorin Dutkay	Richard Klemm	Kevin Roozen	Ronggui Yang
Steven Ebert	Gregg Klowden	Michael Rovito	Yu Yuan
Barry Edwards	Claire Knox	Herve Roy	Antonis Zervos
Heather Edwards	Eda Koculi	Houman Sadri	Lei Zhai
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Jennifer Elliott	Alla Kourova	Suha Saleh	

ARTS AND HUMANITIES

AILEEN DOWLING

Destabilizing Identity: The Works of Dorothy Cross

Mentor: Dr. Ilenia Colon Mendoza (Visual Arts and Design)

Post-structural feminist analysis of the sculptural, installation, and video works of Irish contemporary artist Dorothy Cross in relation to dismantling traditional notions of gendered, cultural, and collective identity in 1990s post-conflict Ireland.

CLAY DUNKLIN

Contemporary Mythologies: Dissecting the Human-Other Animal Relationship Through Visual Forms

Mentor: Ms. Carla Poindexter (Visual Arts and Design)

My work aims to mythologize the contemporary understanding of the human-other animal relationship through a series of drawings, sculptures, and videos. Animal imagery is used in a way that explores current trends in genetics, industry, consumerism, and power to reveal this contemporary mythology.

ALANNA FULK

Two Terms of the Cuban Counterpoint: Transculturation in the Poetry of Nicolás Guillén

Mentor: Dr. Celestino Villanueva (Modern Languages)

The goal of this project is to demonstrate how Nicolás Guillén's use of traditional poetic forms, the Cuban son and portrayal of everyday Afro-Cuban life reveal his vision for a post-colonial, transcultured Cuban society, rather than a Cuba subject to colonialism and acculturation.

RONNETRA GIBBONS

Sustainable Living Project EASY — Environmentally Aware Sustainable Youth: Building a Better Community Through Changing Our Personal Habits to Reduce Waste

Undergraduate Co-Authors: Timothy Widere, Andrea Bennett, Colton Wolfe, Brittany O'Connor, Lindsay Biancardi, Ashley Gallagher, Daniel Jalali, Bianca Currier, Jason Fronczek, Hieu Huynh, Whitney Morris

Mentor: Ms. Eileen Smith (Visual Arts and Design)

Sustainable Living Project EASY is an interactive website that informs, targets new supporters, and supports sustainable living lifestyles. By altering our lifestyles, we aim to achieve better, limited use of this Earth's natural resources in order to provide a better future for our planet.

MADELINE HALVEY

Simple Forms of Dance and Movement Literacy

Mentor: Dr. Kevin Roozen (Writing and Rhetoric)

This research analyzes literacy practices (i.e., reading, writing, and verbal communication) used in two different dance and movement environments: an advanced level jazz class and a beginning level ballet class. This research aims to establish and contrast simple and complex forms of dance literacy.

CHARLES HILL

Understanding Medical Knowledge as a Social Achievement

Mentor: Dr. Luciana Garbayo (Philosophy)

Medical knowledge is of great significance to all people of the world. In order to better understand the subject, a critical evaluation of the work of Miriam Solomon on making medicine will be advantageous for furthering our understanding of medicine and how all of this fits into our society.

AMANDA HORNBERGER

Native Performance Art in a Nonnative Setting: An American's Guide to Musical Theater Performance in Germany

Mentor: Ms. Tara Snyder (Theatre)

The goal of this project is to provide academic and experiential research that will illuminate for American musical theater artists why working abroad is an avenue they should consider and the best ways to break into the European musical theater scene as an actor.

MARTIN JEREZ

Unknown Heroes: A Digitally Interactive Graphic Novel Experience Delving into the Spiritual and Psychological Growth Associated with and Using Psychosynthesis

Undergraduate Co-Authors: Austin Brown, Joseph Trask, Rafael Rivero, Dylan Britton

Mentor: Ms. Eileen Smith (Visual Arts and Design)

The interactive graphic novel that we created will help in the treatment of psychosynthesis. It provides a new and intuitive way for people to discover and better themselves, while enjoying a story and allowing the person treating them to gain valuable information.

KIMBERLY KUNDROTAS

From the Ascetic to the Aesthetic: The Western Reinvention of Yoga

Mentor: Dr. Ann Gleig (Philosophy)

This project will examine the development of modern postural yoga in order to challenge the popular notion that today's consumer-driven fitness and health-oriented yoga is a direct descendant of ancient Indian spiritual traditions.

ALEXANDRA MCFEE

Second Language Production and Comprehension of Bilingual Heritage Speakers

Undergraduate Co-Author: Michael Scimeca

Mentor: Dr. Alvaro Villegas (Modern Languages and Literatures)

Not all bilinguals process language the same way. In this experiment, we compared the ability of heritage speakers and second language learners of English and Spanish to predict information while reading ambiguous sentences in Spanish. Results will demonstrate whether second language learners can attain native proficiency in their second language.

PATRICIA MILLER

Spinoza's *Ethics* and the Good Life: Eliminating Freedom of the Will in the Path to Practical Wisdom

Mentor: Dr. Luciana Garbayo (Philosophy)

This work aims at investigating the philosophical relation between our beliefs about metaphysical and epistemic determinism as limits to the self and its effects in the development of prudence or practical wisdom in Spinoza.

LARRY MORALES

Process and Mind: Is Process Philosophy and Nonlinear Cognitive Systems Science Commensurate?

Mentor: Dr. Luis Favela (Philosophy)

My goal was to show that the nonlinear dynamic systems theory approach to the study of cognition was commensurate with the metaphysics postulated by process philosophers and how each could be employed to confirm and inform the other.

JESSICA NORFLEET

Breaking Down the Rhetoric Podcast: Examining Professional Writings Through Multimedia Research

Mentor: Dr. Marcy Galbreath (Writing and Rhetoric)

Through the use of podcast interviews, this project examines the advanced writing skills workplace professionals are looking for when hiring new employees and provides students with a resource to teach them what they need to know about written communication in their field of study.

KARLA ORIHUELA

Closing the Gap Between STEM Researchers and Their Audience: Using Technical Communication in Poster Boards

Mentor: Dr. Madelyn Flammia (English)

The objective of the project is to take a deeper look into STEM research presentations and examine how complex research is presented to nontechnical audiences in poster board sessions. The project will also seek to develop means to help researchers communicate subject matter knowledge more effectively.

SAMUEL ORTIZ

Asserting Four Indigenous Women's Identity in a Colonial Setting

Mentor: Dr. Daniel Murphree (History)

The study explores these indigenous women's efforts (Doña Antonia, Kateri Tekakwitha, Sacagawea, and Pocahontas) in regard to the internal and external marriage pressures they faced and how these pressures affected their decisions.

JACK PRETTYMAN

Reflections of Project Apollo: Capturing the Memories of the Lunar Missions

Undergraduate Co-Authors: Hannah Estes, Devin Leitenberger, Ashley Weaver, Stephanie Valderrama, Sidnee Rodriguez, Angela Zanicchi, Lauren Finley, Sheherazade Thenard, Wyatt Shumate

Mentor: Dr. Lori Walters (History)

The objective is to capture Project Apollo through the recollections of those who participated in and observed the event and converge emerging media to convey its significance to succeeding generations.

TAYLOR RAINES

Women with Asperger's Syndrome in Popular Culture

Mentor: Dr. Martha Brenckle (Writing and Rhetoric)

The accurate portrayal of individuals with Asperger's syndrome in popular culture heavily contributes to awareness and acceptance of autistic individuals in our society. I researched the prevalence of women with Asperger's syndrome within well-known films about autism spectrum disorders that are considered educational or entertaining.

KERRIANNE REILLY

Learning Russian for More Than Ordering Vodka and Borscht: Grammatical, Paradigmatic Instruction of Verbs for Transferable Linguistic Skills

Mentor: Dr. Alla Kourova (Modern Languages and Literatures)

This project is a digital program for teaching Russian language verb tense, mood, and aspect with a concentration on principles of grammar. The purpose of this program is to reorient the Russian language learning experience to give students transferable skills in the disciplines of linguistics and foreign language acquisition.

CAESAR RICCI

VR in the Park: An Event Exposing the Public to Nontraditional Virtual Reality Applications for Local and Global Change

Undergraduate Co-Authors: Brandon Arrington, Elijah Brose Welch, Garrett Carlson, Francisco Jacobo, Winter King, Sharon Morales, Anthony Morello, Alicia White, John Andreoni, Alena Leerdam

Mentor: Dr. Eileen Smith (Visual Arts and Design)

VR in the Park aims to expose the world to the Orlando VR community of creative thinkers, designers and developers. We bring attention to local problems that can be solved through the use of VR mechanics and awareness to the Virtual World Society and its web of resources.

SHANNON ROKAW

But I Am the Chosen One: Use and Subversion of Biblical Themes in J.K. Rowling's Harry Potter

Mentor: Dr. Tison Pugh (English)

The goal is to analyze the themes used in the Harry Potter book series in order to possess a greater understanding of the ways in which these motifs in children's literature affect the creation of characters and worlds.

HANNAH RUSSELL

Transcending Disability: Providing Individuals with Aphasia the Tools to Communicate in an Interactive Environment that Stimulates Confidence in Daily Routines

Undergraduate Co-Authors: Alex Cruz, Hannah Moore, Nawara Foustok, Lauren Keys, Rachel Bray, Alexis Hart

Mentor: Dr. Janet Whiteside (Communication Sciences and Disorders)

Our goal is to create an engaging environment that encourages therapeutic interaction among those who have aphasia through an interactive simulation. The users will apply what they have learned through these interactions to their daily routines. Transcending Disability will be a virtual reality program that will achieve these goals.

MARIELA SAAD

Gendered Virtue: A Study of Its Meaning and Evolution in Early Modern France

Mentor: Dr. Anne-Charlotte Trinquet (Modern Languages and Literatures)

This research seeks to track the development of the notion of virtue and how it is related to gender and the evolution of morality in early modern France. The analysis maps one of the most relevant concepts evidencing social construction of gender differences and its conceptualization in Western civilization.

MICHAEL SCIMECA

Left Brain vs. Right Brain: An Analysis of Functionality in Cervantes' *Don Quixote*

Mentor: Dr. Martha Garcia (Modern Languages and Literatures)

Cervantes' discussion of medicine and his treatise on human consciousness will be considered through step-by-step analysis of the following: inclusion of scientific references and allusions to defined medical specialties, representation of pain as a selective experience, and characterization of the Don Quixote-Sancho relationship within various chapters of the work.

ARTS AND HUMANITIES CONTINUED

ALEXANDRA STEPANOV**The Rhetoric of Prison Inmates: A Look at Identity Construction Through Writing****Mentor:** Dr. Stephanie Wheeler (Writing and Rhetoric)

This project is a look at the rhetorical strategies that inmates utilize in prison newspapers to construct their identity through this writing juxtaposed to the one constructed for them by society.

EVAN WALLACE**Dante Alighieri's Mystical Influences****Mentor:** Dr. Bruce Janz (Philosophy)

My area of research focuses on the influence of Christian mystics and the inclusion of Christian mystical themes in Dante Alighieri's *Commedia (Divine Comedy)*.

ENGINEERING AND
COMPUTER SCIENCE I**JENNIFER AMBROSE****Notch Size Effect on the Tensile-Compressive Creep-Fatigue Behavior of Nylon 66****Mentor:** Dr. Ali Gordon (Mechanical and Aerospace Engineering)

Nylon 66 tensile specimens with various notch sizes have been subjected to combinations of mechanical and thermal loading to characterize how the notch size influences creep response.

GRETHA ARRAGE**Machine Learning for the Beauty Industry****Mentor:** Dr. Stephen Medeiros (Civil, Environmental, and Construction Engineering)

Because cosmetics are difficult to customize, we designed an artificial neural network trained with facial images to analyze a woman's face to suggest one of four lipsticks. It was trained on 70 percent and tested on 30 percent, and results show that it can be trained to predict beneficial intervention.

AHMAD AZIM**Hybrid Divided-Pulse Amplification****Mentor:** Dr. Lawrence Shah (Optics)

We have demonstrated the first ever hybrid coherent combination of pulses using nested active and passive divided-pulse amplification (DPA) techniques to achieve joule-level laser pulses. Measurements and diagnostics of our combined and uncombined output beam are presented. Analysis shows that hybrid DPA is worthwhile for energy scaling.

KYLE BEGGS**Comparison of an In Vitro Windkessel Model to Its Computational Counterpart****Mentor:** Dr. Alain Kassab (Mechanical and Aerospace Engineering)

Many studies require experimental models to compare against computational counterparts to ensure a correct solution has been achieved. Recreating physiologically accurate fluid dynamics within the vascular system is necessary for evaluating vascular function. This project designed an in vitro (experimental) model of vascular mechanics and compared results to the computational solution.

ITZA BELTRAN**Uniformity of Skin Temperature Distributions in Ultrathin Thermal Ground Planes Compared to Copper Heat Spreaders****Mentor:** Dr. Ronggui Yang (Mechanical and Aerospace Engineering)

Our objectives are to design and fabricate ultrathin thermal ground planes (TGPs), which have higher thermal conductivity than copper and can be easily integrated into printed circuit boards. When integrated into the electronics devices, TGPs can reduce the junction temperature and achieve more uniform skin temperature distributions of the devices.

PATRICK BESANA**Effects of Binary Solvent System on Morphology of Particles****Mentor:** Dr. Weiwei Deng (Mechanical and Aerospace Engineering)

This research explores the consequences of using the electrospray to produce nanoparticles of pharmaceutical substances dissolved in a two-solvent system. In this study, the main focus is on the analysis of the morphology of the nanoparticles as a result of solvent volatility, thermal history, and droplet sizes.

DANIEL BETANCOURT**Efficiency of Photovoltaic Systems****Mentor:** Dr. Issa Batarseh (Electrical Engineering and Computer Science)

To become familiar with photovoltaic systems and study ways in which their efficiency could be improved. This includes learning about recent advances in the field and studying the balance of the system (BOS) and other factors that have prevented the PV system from becoming a more conventional source of energy.

SAMUEL BIGIO**Mobile Magnetic Tracking and Pose Recovery of the Hand****Undergraduate Co-Author:** Conner Brooks**Mentor:** Dr. Joseph LaViola (Electrical Engineering and Computer Science)

A novel input method leveraging independent electromagnetic field trackers on each finger without compromising the mobility of the hand is investigated in order to reconstruct the hand's pose. Maintaining complete dexterity without occlusion of the skin allows more expressive interaction in mixed and augmented reality scenarios.

DASHELL BLAKE**Effect of Switch Delays on Piezoelectric-Based Semi-Active Vibration Reduction Techniques****Mentor:** Dr. Jeffrey Kauffman (Mechanical and Aerospace Engineering)

Through numerous experimental tests, data analysis, and examination, we will establish the optimal switching conditions for three common piezoelectric semi-active vibration reduction approaches. We specially consider forcing frequencies near resonance, where the level of vibration reduction is maximized.

MICHELLE BUITRON**A Comparative Analysis of Grouted Splice Precast Columns vs. Standard Cast-in-Place Columns***Undergraduate Co-Author:* Lianne Brito*Mentor:* Dr. Kevin Mackie (Civil, Environmental, and Construction Engineering)

Seismic design of concrete columns in bridges is heavily dependent on the allowable curvature. The objective of this study is to make a comparison between the standard cast-in-place concrete column design and precast reinforced concrete columns with grouted sleeve connections.

JESSICA CHAMBERS**Flame Turbulence Interaction for Deflagration to Detonation***Mentor:* Dr. Kareem Ahmed (Mechanical and Aerospace Engineering)

In an effort to enhance the deflagration-to-detonation process, the interaction between a deflagrated turbulent flame and a fluidic jet is experimentally studied. Flame flow measurements throughout the interaction provide insight into key mechanisms that drive flame acceleration within a pulse detonation engine.

HARDEO CHIN**The Effects of Blade Mistuning on Vibration Localization***Mentor:* Dr. Jeffrey Kauffman (Mechanical and Aerospace Engineering)

A simplified experimental setup was modeled and created to test its vibration characteristics. The purpose of this setup is to test how mistuning affects the forced response amplitudes. Since vibration localization can lead to premature fatigue, it is of great interest to predict and reduce the maximum blade response amplitudes.

SIERRA CONDO**Noninvasive Measurement of Tympanic Membrane Oscillations***Undergraduate Co-Author:* Leslie Simms*Mentor:* Dr. Hansen Mansy (Mechanical and Aerospace Engineering)

The objective of this project is to create a device that accurately measures and records the oscillations of the tympanic membrane noninvasively.

CASSIDY CONOVER**Energy and Operating Cost Analysis Comparing Spiral-Wound and Hollow-Fiber Nanofiltration Pilot Systems***Mentor:* Dr. Steven Duranceau (Civil, Environmental, and Construction Engineering)

The objective of this project was to compare the operating pressures and energy operating costs of a spiral-wound nanofiltration pilot to a hollow-fiber nanofiltration pilot.

JOSE COTELO**Characterization of 3-DP Polylactic Acid Under Monotonic and Cyclical Torsion***Mentor:* Dr. Ali Gordon (Mechanical and Aerospace Engineering)

The objectives of this study were to characterize the torsional monotonic and cyclical response of polylactic acid to develop a more thorough understanding of the effect of various fused-deposition modeling (FDM) parameters on the mechanical properties of 3-D printed components. The tested production variables included wall thickness, print angle, and heat treatment.

ABIGAIL EASTERDAY**Observing Extreme Sensitivity in a Chaotic System***Mentor:* Dr. Jeffrey Kauffman (Mechanical and Aerospace Engineering)

Our objective is to analyze the chaotic dynamics of a nonlinear pendulum through numerical simulation and direct observation of an experimental system. The end goal is to combine sporadic imaging of the pendulum with the theoretical equations of motion to track the chaotic pendulum motion using minimal data.

TAYLOR FORTH**Recycled Roads: Driving Down the Environmental Costs of Pavement Production***Mentor:* Dr. Boo Hyun Nam (Civil, Environmental, and Construction Engineering)

To determine if recycled roofing shingle can be used as an acceptable replacement for virgin aggregate. This study suggests that due to their similar properties, roofing shingle may be a sustainable replacement for virgin aggregate.

FRED GRAVIL**Extending the Java Modeling Language to the Android Environment***Mentor:* Dr. Gary Leavens (Electrical Engineering and Computer Science)

The objective of the research is to provide a thorough understanding of how JML works in Java. Although JML offers programmers an easier way of reading and understanding other people's code, it is often overlooked in the programming community.

GEOFFREY GREGORY**TCAD Modeling of TLM Contact Resistance Structures***Mentor:* Dr. Kristopher Davis (Optics)

The TLM approach to measuring contact resistivity is commonly performed in the solar cell community to help optimize cell design and for use in quality control. In an attempt to better understand the method and its sensitivities to the physical characteristics of test structures, a physical model has been constructed.

ARI HADAR**Studying the Formation of Suspected Disinfection Byproduct Carcinogens Using Fluorescence Spectroscopy, UV254 Absorbance, and Apparent Molecular Weight Distribution***Mentor:* Dr. Steven Duranceau (Civil, Environmental, and Construction Engineering)

This research was conducted to develop an empirical model that relates the formation of disinfection byproducts (DBPs) — suspected carcinogens — to the characteristics of their natural precursors found in groundwater. Results may provide insight that would yield strategies that will reduce a person's exposure to DBPs when consuming drinking water.

REBECCA HARRIS**Photo-Fermentation for Biological Hydrogen Production Using Organic Wastes***Mentor:* Dr. Woo Hyoung Lee (Civil, Environmental, and Construction Engineering)

The objective of this research is to produce hydrogen as a fuel from biological wastewater processes. The algal photo-fermentation is a novel approach in this project to produce hydrogen via algae metabolism in an anaerobic environment using organic waste like food waste, providing a beneficial use for waste products.

ENGINEERING AND COMPUTER SCIENCE I CONTINUED

MICHELLE HAWLEY**Embrace**

Undergraduate Co-Authors: Saeid Kheder, Any Lai, Daniel Rosato

Mentor: Dr. Adrienne Dove (Physics)

To design, build, test, and deliver 3-D printed leg braces to a young boy with a rare bone disease. The new braces hope to solve the established problems with his current braces, including difficulty with knee adjustment and waterproof limitations.

ANTON KEYS
Euler Angle, Miller Index, and Rotation Matrix Conversion Tool Designed as a Simple Matlab Graphical User Interface

Mentor: Dr. Ali Gordon (Mechanical and Aerospace Engineering)

Create a Matlab graphical user interface that can take user input or Excel data in the form of Euler angles, Miller Indices, or rotation matrices, convert between the different rotations systems, and either display the result within the GUI or output it to a new Excel file.

ENGINEERING AND COMPUTER SCIENCE II

LUCA LETIZIA
Structural Health Monitoring of Composite Overwrapped Pressure Vessels

Mentor: Dr. Necati Catbas (Civil, Environmental, and Construction Engineering)

The research offers an in-depth study on composite overwrapped pressure vessels (COPVs) from a structural health monitoring (SHM) point of view. An engineering analysis provides us with a better understanding of the structural behavior of both damaged and undamaged tanks under pressure.

NATALIE LOPEZ
Development of an Airflow Source with Low Acoustic Noise

Mentor: Dr. Hansen Mansy (Mechanical and Aerospace Engineering)

The objective of this project is to design an air supply source with low acoustic noise. This will be used in studies of sound generation in branching airflow networks.

MICHAEL LOPEZ-BRAU
Mining Collective Intelligence for Robust Spectrum Sensing in Cognitive Radio Networks

Mentor: Dr. Nazanin Rahnavard (Electrical Engineering and Computer Science)

We adapt a Bayesian inference framework to infer the true values of occupied frequency bands observed from spectrum sensing in cognitive radio networks. Through extensive numerical simulations, we show that our proposed algorithm reduces the impact of malicious, dependent, or otherwise unreliable sources in these networks.

STEPHANIE LOPEZ
Investigation of Pressure Drop and Heat Transfer Behavior of a Square Channel with 45-Degree Angle Ribs

Mentor: Dr. Jayanta Kapat (Mechanical and Aerospace Engineering)

Research was based on internal duct cooling of a turbine blade. Data was collected in a square channel with 45-degree angle ribs at a wide range of Reynolds number to identify behavior in both heat transfer and friction in the flow channel.

DUNCAN LOZINSKI
Fate of Organic Matter from Leachate Discharged to Wastewater Treatment Plants

Mentor: Dr. Debra Reinhart (Civil, Environmental, and Construction Engineering)

The specific impacts of leachate on wastewater treatment plant effluent quality are not well-known. The goal of this proposed research is to increase our understanding of the nature and fate of recalcitrant, UV-absorbing, and organic nitrogen-containing compounds in leachate that is co-treated with domestic wastewater.

REBECCA MCLEAN
Sodium Ion Effect on *Chlorella vulgaris* as a Means of Increasing Lipid Production for Bioenergy

Mentor: Dr. Woo Hyung Lee (Civil, Environmental, and Construction Engineering)

The objective of this research is to investigate the potential benefit of using the sodium ion to manipulate the metabolism of algae in order to increase its lipid production. Lipids are then to be processed for bioenergy, which is an emerging alternative energy.

CRISTIAN MEJIA
Predicting Cyclic Hardening of Inconel 792 at Elevated Temperature

Mentor: Dr. Ali Gordon (Mechanical and Aerospace Engineering)

The motivation of this research is to create mathematical models to assist in predicting the behavior of Inconel 792-5A under different temperatures. Data analysis, plotting, and math models derived from the power law can help predict benefits for future application of Inconel 792-5A in the aerospace or gas turbine industry.

JULIAN MOORE
Coil-Type Asymmetric Supercapacitor Electrical Cables

Mentor: Dr. Jayan Thomas (Materials Science and Engineering)

A new and improved dual-function supercapacitor device capable of simultaneous energy storage and transmission is presented. Combining different electrode materials for the anode and cathode, the working voltage is expanded from 0.8V to 1.6V. The coil-type wire design employed enables superior flexibility and durability without decreasing performance.

MOHAMMED AL MUQBEL
Mechanisms of Vortex Oscillation in a Fluidic Flow Meter

Mentor: Dr. Hansen Mansy (Mechanical and Aerospace Engineering)

The objective of this project is to study the mechanisms of flow instability in a fluid oscillator that can be used as a flow meter. Understanding this phenomenon will help optimize the design of the meter.

PHILIPE NAJARRO**A System for Reducing Structural Vibration Pollution**

Mentor: Dr. Hansen Mansy (Mechanical and Aerospace Engineering)

The objective of this project is to test a passive system for reducing the effect of polluting structural noise.

CATHERINE NINAH**University Initiatives on the Food, Energy, and Water Waste Nexus**

Mentor: Dr. Debra Reinhart (Civil, Environmental, and Construction Engineering)

With the goal of the Environmental Protection Agency and Department of Agriculture to reduce food waste by 50 percent by 2030, this research models the waste flow and assesses alternatives and solutions to help achieve a more sustainable future. Specifically, sustainability initiatives across different universities are reviewed and compiled.

ANTONETT NUNEZ-DELPRADO**Life Prediction of Engineering Structures**

Undergraduate Co-Author: Nick Jones

Mentor: Dr. Ali Gordon (Mechanical, Materials, and Aerospace Engineering)

We have tested fatigue analysis models in order to predict the history of materials with respect to cycles for failure. We then developed methods to streamline these computations and created a graphical user interface that allows users to query how materials would behave under complex thermal, mechanical, and vibratory loads.

WILSON PEREZ**Finite Element Simulation of Single-Lap Shear Tests Utilizing the Cohesive Zone Approach**

Mentor: Dr. Ali Gordon (Mechanical and Aerospace Engineering)

This research develops a finite element simulation of the debonding that occurs during single-lap shear testing. Effective adhesive bonds are crucial in various mechanical and aerospace applications. Through the use of this simulation, adhesive strength can be assessed and newly formulated adhesives can be modeled and analyzed.

ALEX RODRIGUEZ**Travel Time Optimization: Emergency Respondent Routing Under Variable Hazardous Conditions**

Mentor: Dr. Stephen Medeiros (Civil, Environmental, and Construction Engineering)

Emergency response teams must react quickly to a number of unforeseen events occurring at many locations within their service area. Using a Monte Carlo simulation framework, this project analyzed the variability in travel time from an Orange County fire station to four strategic locations on the UCF campus.

JOHN ROYERO**Balloon Explosion Dynamics**

Undergraduate Co-Author: Jaysen Mulligan

Mentor: Dr. Kareem Ahmed (Mechanical and Aerospace Engineering)

The evolution of flame kernels under various fuel and pressure conditions was investigated through the use of high-speed schlieren imaging, revealing the hidden complexities of the combustion dynamics of premixed fuel in an everyday balloon.

BROOKE SARLEY**Characterization of the Microstructure of SLM IN718 Under Extreme Environments**

Mentor: Dr. Seetha Raghavan (Mechanical and Aerospace Engineering)

Investigate the microstructure of selective laser-melted super alloy Inconel 718 to understand the effects of build direction and heat treatment as well as to capture in situ microstructure evolution with temperature using synchrotron measurements.

ALEX SELIMOV**Effects of Silane Treatment on the Dispersion of Alumina Fillers in Hybrid Carbon Fiber Reinforced Polymers via Piezospectroscopy**

Undergraduate Co-Authors: Ryan Hoover, Valentina Villegas

Mentor: Dr. Seetha Raghavan (Mechanical and Aerospace Engineering)

To investigate the effects of silane coupling agents on the dispersion of alumina filler in hybrid carbon fiber-reinforced polymer and thereby their effects on the mechanical properties of these materials.

LEO SHANE**A Human-Centric Approach to Research, Design, and Development of Innovation Workstation Module for the National Aeronautics and Space Administration**

Undergraduate Co-Authors: Brian Strevens, Karissa Hall, Sylvia Dipaulo

Mentor: Dr. Pamela McCauley (Industrial Engineering and Management Systems)

The objective of this research was to assess and design a NASA firing room to meet the dynamic and evolving needs of a diverse aerospace community. During launch week, the module NASA employees are working with needs to be ergonomically sound while retaining the necessary features required to operate efficiently.

DARREL THOMPSON**A Graphic User Interface for Fluorescence Microscopy with Medical Imaging Applications Using a Talbot Grid with Incoherent Illumination**

Mentor: Dr. Shuo Pang (Optics)

A graphic user interface (GUI) was created using Matlab to control the parameters used in the imaging sequence of a fluorescence microscopy research project that utilizes the Lau effect to achieve a Talbot grid with incoherent illumination in the hopes of developing a more robust medical imaging technique.

JASMINE THOMPSON**Laser-Induced Breakdown Spectroscopy of Sub-Nanoliter Droplets**

Mentor: Dr. Martin Richardson (Optics)

The elemental composition of a sample can be identified by radiation emitted from laser-induced plasmas. This technique, called laser-induced breakdown spectroscopy (LIBS), was used to detect the elemental composition of doped 0.2 nanoliter water droplet. This technique can be further utilized to identify biochemical threats to homeland security.

SHANTAL TUMMINGS**Investigating Optimal Conditions for Glycerol Conversion to Propionic Acid During Prefermentation**

Mentor: Dr. Andrew Randall (Civil, Environmental, and Construction Engineering)

The objective of this project was to find what conditions during prefermentation were most suitable for propionic acid.

ENGINEERING AND COMPUTER SCIENCE II CONTINUED

JOEY VELEZ-GINORIO**Temporal Order-Based First-Take-All Hashing for Fast Attention Deficit Hyperactivity Disorder Detection**

Mentor: Dr. Guo-Jun Qi (Electrical Engineering and Computer Science)

Working on this project, I was able to research the potential for machine learning to assist in the detection of ADHD from fMRI time courses. With exciting success, our results aim to further the collaboration between computer science and computational neuroscience: to tackle problems pertaining to classification of medical imaging data.

RYAN VILLANUEVA**A Study on How Underplatform Damper Material Properties Influence Contact Stiffness Values**

Mentor: Dr. Jeffrey Kauffman (Mechanical and Aerospace Engineering)

The material properties and geometry of an underplatform damper in a gas or steam turbine determine its contact stiffness values. These values are essential in accurately predicting the blade vibration response. This study's goal is to quantify the impact of altering certain material properties on the resulting contact stiffness values.

STEPHEN WILLIAMS**Comparison of Real-Time Image Scaling Algorithms for Use in FPGA Image Processing Systems**

Mentor: Dr. Ronald DeMara (Electrical Engineering and Computer Science)

In this study, a framework is established in which real-time image scaling algorithms are compared for use in field-programmable gate array (FPGA) image processing systems. This framework can be used by engineers to identify the best-suited algorithm for their system's needs.

KYLE WILLNOW**Distributed Teamwork Simulation in a Virtual World**

Mentor: Dr. Avelino Gonzalez (Electrical Engineering and Computer Science)

This project involves the creation of a virtual infrastructure in which to observe teamwork, in the form of a bucket brigade, and the capture of data from the observations. The data will then be leveraged to investigate the feasibility of virtual simulations for practicing teamwork.

JACOB WURM**Security Analysis of Commercial and Industrial Internet of Things Devices**

Mentor: Dr. Yier Jin (Electrical Engineering and Computer Science)

To perform comprehensive security analyses on Internet-connected embedded devices from both the commercial area and critical infrastructure in order to showcase the types of vulnerabilities that are present in modern devices and also propose methods to mitigate them.

HEALTH SCIENCES I

WESLEY ADAMS**Control Identity: Knowledge, Awareness, and Intention Undergraduate Co-Author: Sara Chimzar**

Mentor: Dr. Michael Rovito (Health Professions)

The Control Identity typology was created to categorize males by personality traits in relation to health beliefs and values. Knowledge and awareness were evaluated as a new composite variable between the typology groups and assessed to see its predictive value in regard to intention to perform testicular self-examination.

MICHELLE AIELLO**Is Meditation Good for the Heart? A Study of the Effect of Compassion Meditation on HRV Among Veterans with PTSD**

Mentor: Dr. Ariel Lang (Psychology)

The present study investigates the effects of compassion meditation (CM) on heart rate and heart rate variability (HRV) among veterans with post-traumatic stress disorder (PTSD). This project was conducted in order to provide insight into one mechanism by which CM may be effective to reduce PTSD symptoms.

DEBERLY ANZUETO**Study and Analysis of Upper Gastrointestinal Symptoms Among Students at the University of Central Florida**

Mentor: Dr. Suha Saleh (Health Professions)

Study of how certain risk factors like stress, smoking, diet, alcohol intake, and nonsteroidal anti-inflammatory drug use among students at the University of Central Florida correlate with complaints of upper gastrointestinal symptoms. This contributes to the literature of upper gastrointestinal health among young adults because they are not well-represented.

KAYLA BERRIOS**Predictive Study of Patients with Dysphagia in General Otolaryngology Practice**

Mentors: Dr. Bari Hoffman-Ruddy, Dr. Giselle Carnaby (Communication Sciences and Disorders)

The purpose of this study was to determine the prevalence of clinical and subclinical swallowing difficulty (dysphagia) in a population of patients seeking otolaryngologic evaluation. A convenience sample of 500 participants was included. Analysis of reported symptoms, medical diagnosis and implications for patient education and treatment will be discussed.

TIYE BROWN**Analysis of Swallow-Related Quality of Life for Patients with Head and Neck Cancer**

Mentor: Dr. Barri Hoffman Ruddy (Communication Sciences and Disorders)

Swallow impairment frequently occurs in head and neck cancer (HNC) patients undergoing radiation treatment (RT) and may cause malnutrition, dehydration, and increased mortality secondary to aspiration-related lung infections. This study analyzed feeding tube presence from 30 participants five years post RT along with swallow-related QOL compared to national benchmarks.

MEREDITH CANTY**Picture This: Using Picture-Naming Vocabulary Tests to Understand the Errors of Children with Expressive Language Impairments***Undergraduate Co-Author:* Juliana Hirn*Mentor:* Dr. Jacqueline Towson (Communication Sciences and Disorders)

The results from expressive vocabulary tests given to preschool-age children with language impairments will be analyzed to determine the types of semantic errors and the correlation of those errors to their overall language ability. This study will help teachers and speech-language pathologists determine appropriate interventions when working with this population.

ANJU CHACKUNGAL**Barriers for Elderly Oncology Patients***Mentor:* Dr. Victoria Loerzel (Nursing)

The purpose of this research study is to identify barriers in older oncology patients that prevent them from managing side effects like chemotherapy-induced nausea and vomiting (CINV) at home.

SARA CHIZMAR**Knowledge, Attitudes, and Intention: Masculinity's Influence Upon Nutritional Habits of College Males***Mentor:* Dr. Michael Rovito (Health Professions)

An exploration of the relationship between masculinity and nutritional knowledge, including both perceived and actual levels of knowledge. An original survey investigated any existent relationships between masculinity, attitudes about nutritional behavioral, and intention to apply nutritional knowledge.

JENNIFER CLINE**Preoperative Anxiety Interventions in School-Age Children and Their Effect on Postoperative Outcomes***Mentor:* Dr. Leslee D'Amato-Kubiet (Nursing)

Exploring the outcomes of the various preoperative interventions in children can help determine if there is a difference between the pharmaceutical or behavioral intervention aimed at reducing anxiety prior to induction of anesthesia that will produce greater optimal post-op outcomes.

ANNE DOLMOVICH**Prevention of Reincarceration of Women with Mental Illness***Mentor:* Ms. Kimberly Dever (Nursing)

One group that, by percentage, is vastly overrepresented in the prison system is women with mental illness. This literature review looks at the factors behind incarceration, so as to suggest social and educational reforms with the potential to reduce this occurrence.

GIOVANNA GIANNINI**Nutritional Resources for Student-Athletes in Division 1 College Football Institutions: The Athletic Trainers' Perspective and Role***Mentor:* Dr. Kristen Schellhase (Health Professions)

The purpose of this study was to examine the quantity, quality, and variety of nutritional support offered to Division I student-athletes who participate in football. Additionally, the purpose is to gain the perspective of the athletic trainer regarding their role and influence in educating student-athletes on basic nutrition principles.

EMIANGELIZ GONZALEZ LUNA**Perceptions of Adherence to Clinical Practice Guidelines for Low Back Pain Treatment of Physical Therapy Students and Recent Graduates***Mentor:* Dr. William Hanney (Health Professions)

This study aims to analyze possible factors that can affect perceptions toward adherence of clinical practice guidelines for low back pain treatment of current and past physical therapy students. An original survey was created to measure demographics, current knowledge of guidelines, influential resources, and perceptions about adherence to these guidelines.

TAYLOR GOSS**Are Nonsteroidal Anti-Inflammatory Injections More Effective at Reducing Chronic Pain Than Opioid Pain Treatment in Patients with Rotator Cuff Injuries?***Mentor:* Dr. Michael Rovito (Health Professions)

This study aims to compare preoperative nonsteroidal anti-inflammatory treatments to traditional opioid treatments as related to the reduction of long-term chronic pain and increase of range of motion in surgical rotator cuff repair patients.

JUSTIN GRACE**Recognizing Pain Using Novel Simulation Technology***Mentor:* Dr. Kelly Allred (Nursing)

This research was designed to observe nursing students interacting with a human patient simulator with front projection technology displaying a face with the physical manifestations of pain. Eventually, the potential for increased identification of conditions requiring observation of subtle facial changes will be explored.

SHANNON HASSETT**Technologies to Enhance Optimal Glycemic Control in Young Adults with Type 1 Diabetes***Mentor:* Dr. Laura Gonzalez (Nursing)

This study surveys a group of 18- to 30-year-old Type 1 diabetics on the types of technologies and tools they use to maintain their diabetes. It is predicted that the diabetics with the most modern diabetes maintenance technology have the greatest glycemic control.

CLAUDIA HERNANDEZ**The Moderating Role of Caffeine Intake on Stress and Academic Performance***Undergraduate Co-Author:* Jasmine Samuel*Mentor:* Dr. Mustapha Mouloua (Psychology)

The moderating role of caffeine on the relationship between stress and academic performance was studied.

CHELSEA HUGHES**Dosing Accuracy When Administering Oral Medications***Mentor:* Dr. Kelly Allred (Nursing)

Determine if parents make dosing errors when administering liquid medication and explore relationships among subjects that make errors and those that do not. Provide this data to inform discharge education to address issues identified.

HEALTH SCIENCES I CONTINUED

SHANNON HUGHES**The Effects of Sleep Quality on Body Composition in Third-Shift Nurses***Undergraduate Co-Author:* Brittney Beckmon*Mentor:* Dr. Michael Rovito (Health Professions)

The objective of this proposal is to show a causal relationship between sleep quality in third-shift nurses and a significant change in biometric measurements of BMI and body fat percentage. Additionally, the effect of psychosocial stress as a covariate of sleep quality will be analyzed.

KENISHA JOHNSON**Assessing the Food Environment Around Elementary Schools in the U.S. with GIS Analysis***Undergraduate Co-Author:* Maria Scott*Mentor:* Dr. Yingru Li (Sociology)

The childhood obesity rate has been rising rapidly in last few decades. Why has this trend occurred, and what is contributing to this epidemic?

LINDA LAVADIA**Effects of A Parent-Focused Intervention on the Communication of Children Using Augmentative and Alternative Communication Technologies***Mentor:* Dr. Jennifer Kent-Walsh (Communication Sciences and Disorders)

This study investigated the effects of a parent instruction program on the communicative turn-taking of children with severe speech impairments. The specific objective was to examine how parent instruction, focusing on supporting children's communication using an iPad app, would affect the children's communication rate and type of communicative messages delivered.

HEALTH SCIENCES II

STEPHANIE LEVINE**Music Therapy as an Intervention to Reduce Anxiety in Mechanically Ventilated Patients***Mentor:* Dr. Mary Lou Sole (Nursing)

The effects of music therapy on anxiety levels of mechanically ventilated patients will be examined in order to determine whether music is a recommended intervention for those in critical care environments.

NICOLE LICATA**Yoga and Quality of Life in Breast Cancer Survivors***Mentors:* Dr. Victoria Loerzel (Nursing), Dr. Mary Ann Burg (Social Work), Dr. Dawn Turnage (Nursing)

The purpose of this research is to evaluate yoga's effect on quality of life in breast cancer survivors.

NATHALIA LIMA**Benefits of Sea Salt Concentration on Lung Function and Quality of Life in Cystic Fibrosis Associated with Proximity to Ocean***Undergraduate Co-Authors:* Morgan Warshowsky, Tayor Sens, Alexis Curry-Hibbert*Mentor:* Dr. Michael Rovito (Health Professions)

To explore whether having constant exposure to sea salt aerosols in the atmosphere by living near the ocean is an alternative to hypertonic saline solution treatment. Findings would include knowledge that an individual with cystic fibrosis could use to make an evidence-based decision to relocate closer to the ocean.

HANNA LINDNER**Identifying the Best Predictors of Intention to Perform Testicular Self-Examination in Young Adult Males***Mentor:* Dr. Michael Rovito (Health Professions)

Testicular self-examination (TSE) is a valuable tool to combat late-stage diagnoses of testicular cancer. This study identified the best predictors of intention to perform TSE in adolescent males in order to create tactical promotional messages to increase the use of TSE.

CHELSEA MAPP**The Effects of Cerebrovascular Aging on Poor Sleep in Aging Adults Using an fNIR Machine***Mentor:* Dr. Daniel Paulson (Psychology)

Cerebrovascular burden (CVB) is a significant factor among the aging population. This study seeks to examine the relationships between sleep and cerebrovascular aging in a sample of older adults. The functional near-infrared spectroscopy (fNIR) will be a substantial mediator of the relationship between cerebrovascular burden and subjective sleep impairment.

HANNAH MARTINEZ**The Efficacy of Nonpharmacological Pain Management Methods Amongst Premature Neonates in the Neonatal Intensive Care Unit (NICU)***Mentor:* Dr. Leslee D'Amato-Kubiet (Nursing)

The purpose of this study is to review current research examining the use of nonpharmacological pain management strategies in premature neonates and the relationship between health outcomes and time to discharge from the NICU. These nonpharmacological pain management strategies include gentle human touch, facilitated tucking, non-nutritive sucking, and kangaroo care.

DONNELLE MCDONALD**The Immunological Effects of Childhood Asthma on the Development of Lung Cancer in Black Males***Mentor:* Dr. Michael Rovito (Health Professions)

The objective of this case-control study is to evaluate the effects of childhood asthma on the development of lung cancer in black males. In addition, this study will also compare both asthma severity and asthma medication used in relation to lung cancer occurrence.

LEAH MCDONNELL**Self-Efficacy and Coping in Transition of Care After Remission of Cancer in Adolescents***Mentor:* Dr. Leslee D'Amato-Kubiet (Nursing)

The objective of this research is to understand, analyze, and identify the role of self-efficacy and coping in adolescents long term after cancer survival. Results of this study are expected to improve behavioral therapies used in the adolescent cancer survivor populations and improve their quality of life long term after remission.

SABIHA NIZAM**Risks/Benefits of Selective Serotonin Reuptake Inhibitors and the Effect of Parent/Patient Compliance on Medication Teaching in Pediatric Anxiety Disorders***Mentor:* Ms. Kimberly Dever (Nursing)

Pediatric anxiety disorders are the most common psychiatric illnesses, and with the use of selective serotonin reuptake inhibitors (SSRIs) treatment can be very successful. This integrated literature review was to examine the risks and benefits of SSRIs and patient/parent teaching to reduce the risks and increase the benefits of SSRIs.

ARNALDO PEREZ NEGRON

Assessing the Health of the Puerto Rican Population in Central Florida

Mentor: Dr. Fernando Rivera (Sociology)

The health profile of Puerto Ricans, specifically its population living in the Orange and Osceola counties of Central Florida, will be examined in order to trace possible leading causes and medical conditions of why this group is categorized as having the lowest health status among Hispanics in the United States.

DANIELLE PERNA

Health-Related Stressors and Prescription Drug Misuse: Findings from the National Survey on Drug Use and Health

Mentor: Dr. Jason Ford (Biology)

The current research examines the relationship between various health-related stressors and prescription drug misuse in a national sample of adults.

TYLER PHILLIPS

The Effects of Performance-Enhancing Drugs on Prostate-Specific Antigen Levels in Professional Martial Arts Fighters in Florida

Undergraduate Co-Author: Andrea Siguenza

Mentor: Dr. Michael Rovito (Health Professions)

Our goal is to bridge a gap in understanding the relationship between performance-enhancing drug use and the levels of prostate-specific antigen in the blood. Researching these topics while exploring potential risk factors will improve athlete safety and awareness.

PAYTON RAUSCH

The Relationship Between Childhood Physical Activity Levels and Obesity Incidence and Physical Education Requirements Mandated by State Boards of Education

Mentor: Dr. Anna Valdes (Educational and Human Sciences)

To analyze and determine the relationship between the physical education requirements of state boards of education and levels of childhood physical activity and obesity in those states. State mandates will be quantitatively assessed to determine how closely their requirements meet current Centers for Disease Control recommendations.

SAMANTHA SERMARINI

Black Caregiver Responses to and Perceptions of Signs, Symptoms, and Treatments at the End of Life

Mentor: Dr. Norma Conner (Nursing)

The purpose of this study was to determine how black caregivers interpreted signs, symptoms, and treatments for symptom relief during the last months of their loved one's life. The effect on caregiver decision-making was explored.

ANDREA SIGUENZA

Evaluation of the Health Provider Toolkit for Adolescent/Young Adult Males: Comprehensive Needs Assessment for Implementation in Central Florida Secondary Schools

Mentor: Dr. Michael Rovito (Health Professions)

The research objective is to conduct a comprehensive needs assessment of the health concerns related to adolescent and young adult males within the Seminole and Orange county school districts. The data from the assessment will assist in creating an intervention program geared at providing adequate health care to this population.

BRIAN SKIBO

Pharmacogenomic Management of Familial Hypercholesterolemia

Mentors: Dr. Angeline Bushy, Dr. Leslee D'Amato-Kubiet (Nursing)

Familial hypercholesterolemia is a genetic disease that has been difficult to treat, and traditional therapies can have little effect on disease progression. New advances in pharmacogenomics allow individuals with familial hypercholesterolemia a more specific and effective treatment plan. This research looks to explore the effectiveness of new therapies.

ANGELIQUE TEJADA

Kienböck's Disease in a High School Linebacker: A Case Study in Osteonecrosis and Lunate Replacement

Mentor: Dr. Kristen Schellhase (Health Professions)

This case study was conducted to explore the ramifications of a common athletic injury, genetic disposition, and confusion due to a rare disease that has multiple common differential diagnoses.

BRIANNA TERRY

The Synchronicity Between Hope and Quality of Life in Terminal Cancer Patients

Mentor: Dr. Susan Chase (Nursing)

The objective of this research project was to investigate and analyze the relationship between hope and quality of life in terminal cancer patients. These findings were utilized to interpret and define the health care provider's role in supporting this relationship.

ASHLEY TIERNEY

Developing the Young Adult and Adolescent Male Health Behavior Indicator Scale (YAAMHBIS)

Mentor: Dr. Michael Rovito (Health Professions)

In order to address the gap in the available validated and comprehensive assessment tools in the young adult and adolescent male population, we developed the original Young Adult and Adolescent Male Health Behavior Indicator Scale (YAAMHBIS). This scale can provide a comprehensive assessment for health interventions and clinical assessments alike.

ADRIANNA TILTON

What Are the Primary Variables that Affect Sexual Debut Timing in Adolescent Males?

Mentor: Dr. Michael Rovito (Health Professions)

Sexual debut, or the age one has intercourse for the first time, is an important marker of personal and social identities. The objective of this project was to analyze the relationship between familial structure, masculinity, and peer groups and sexual debut timing in young adult and adolescent males.

FERNANDA TIRADO

Identification of Median Elapsed-Time-to-Cardiopulmonary Resuscitation of Nursing Students Through a Simulated Adult In-Hospital Cardiac Arrest

Mentor: Dr. Laura Gonzalez (Nursing)

The intent of this study is to define median elapsed-time-to-CPR in nursing students using simulation to recreate an adult in-hospital cardiac arrest (IHCA). This project was designed to explore the knowledge gaps in the actual performance of health care providers given that failure to execute CPR has been documented in clinical settings.

LIFE SCIENCES I

ADEDAYO ABIOYE

Toward A Light-Driven Release/Activation of Anticancer Drugs Within Metal-Organic Framework Materials

Mentor: Dr. Fernando Uribe-Romo (Chemistry)

In this research is presented a method and model for anchoring inactive forms of anticancer drugs inside crystalline metal-organic frameworks, which will be delivered upon irradiation with light of specific wavelength in targeted cancerous cells.

ANDREW ABOUJAOUE

Characterization of the *Plasmodium* CDK-like Kinase PK6 Interactions Using In Vivo Fluorescent Techniques

Mentor: Dr. Debopam Chakrabarti (Biomedical Sciences)

The goal of this project is to confirm the protein-protein interactions identified by the co-immunoprecipitation experiments. In addition, this research aims to determine the subcellular localization of the putative interactors.

MOHAMMAD ALI

Growth of SV5 M-Mutant Oncolytic Vector in Normal Human Prostate BPH Cells

Mentor: Dr. Griffith Parks (Biomedical Sciences)

To analyze and determine the exponential growth curve of the oncolytic SV5 M-mutant virus in BPH cells.

LACIE ANDERSON

Location, Location, Location: Evaluating the Success of Future Oyster Real Estate in Brevard County, Florida

Mentor: Dr. Linda Walters (Biology)

Introduction of the eastern oyster into estuarine areas with limited current populations is considered a natural approach to improve water quality. Through this study we have evaluated the success of multiple treatments for reintroducing the eastern oyster to Brevard County, Florida. Factors considered include oyster survival, size, and natural recruitment.

AMNIE ASHOUR

Characterization of GABAergic Neurons from Induced Pluripotent Stem (iPS) Cells of Schizophrenic Patients

Mentor: Dr. Kiminobu Sugaya (Biomedical Sciences)

To differentiate adult schizophrenic and wild-type embryonic-like stem cells to neural cells and search for the presence of intracellular proteins GAD67 and p38. Cells positive for either marker were analyzed as quantitative data. The process for differentiation to the target morphology was well-documented as qualitative data.

COURTNEY ASTORE

Genes4Vaccines: A Computational Model that Utilizes Comparative Genetics to Identify DNA and Protein Sequences for Novel Vaccines

Mentor: Dr. Aaron Smith (Mathematics)

To eliminate the dated guess-and-check methodology in the early stages of vaccine research and development, Genes4Vaccines is a program that will aid in predicting the components of pathogens that can be used for effective vaccines. Genes4Vaccines can be utilized in developing novel vaccines.

GRACE AVECILLA

An Investigation of the Correlation Between Temperature, Cuticular Melanization, and Immune Function in the Asian Citrus Psyllid, *Diaphorina citri*

Mentor: Dr. Ken Fedorka (Biology)

This project explores how annual temperature fluctuations influence insect cuticles, immune function, and pathogen load. Specifically, we examine a wild population of Asian citrus psyllid, *Diaphorina citri*. *D. citri* vectors the bacteria responsible for citrus greening disease, which has caused devastating economic loss to the state of Florida.

ZARINA MARIE BALDE

Discovery and Characterization of Novel Antimalarials from NP-Inspired Compounds

Undergraduate Co-Author: Emily Eischen

Mentor: Dr. Debopam Chakrabarti (Biomedical Sciences)

We plan to discover potent antiparasitodal scaffolds by screening natural-based synthetic libraries. Our goal is to characterize the unique compounds by determining their cellular mechanism of action and selectivity for prioritized hits. These data will provide critical information that will serve as advanced starting points for the antimalarial drug discovery pipeline.

YEPETH BERTIE

Biophysical Characterization of Human DEAD-Box Protein 1

Mentor: Dr. Eda Koculi (Chemistry)

The goal of this investigation was to biophysically characterize DEAD-box helicase 1, a protein implicated in HIV-1 and cancer progression. A combination of affinity, ion-exchange, and gel-filtration chromatography was used to purify the protein expressed in *Escherichia coli*. Biophysical characterization of purified DEAD-box helicase 1 was accomplished through biochemical assays.

ALEXIA BOSSAN

The Function of FGD4 and Its Role in the Development of Drug-Resistant Prostate Cancer

Mentor: Dr. Ratna Chakrabarti (Biomedical Sciences)

My objective is to explore the function of FGD4 and its role in development of drug-resistant PCA by identifying the effect of FGD4 expression reduction on the behavior of an aggressive prostate cancer cell line.

VICTORIA BRODIE

What Our Eyes Can't See: Distribution of Microplastic Pollution Within Mosquito Lagoon and the Eastern Coast of Central Florida

Undergraduate Co-Authors: Meagan Minadie, Aliris Loperena, Christian Pilato, Jennifer Griffith

Mentor: Dr. Linda Walters (Biology)

Determining the distribution and concentration of microplastic pollution through sediment and water samples collected on the Atlantic coast versus Mosquito Lagoon, up to 32 kilometers south from Ponce de Leon Inlet. The data collected improves our understanding of the abundance of microplastic debris in Florida.

AUSTIN BURNS**Characterization of Thioredoxin Reductase of *Clostridium difficile* from an *Escherichia coli* Culture****Mentor:** Dr. William Self (Biomedical Sciences)

The aim of this research project is to characterize thioredoxin reductase (TrxR) from *Clostridium difficile* produced in an *Escherichia coli* culture system. The successful extraction of TrxR will enable the study of these proteins for drug discovery research.

EMILY BUSSE**Dasatinib Treatment of Orthotopic Allograft Mouse Model of Neurofibromatosis Type 2****Mentor:** Dr. Cristina Fernandez-Valle (Biomedical Sciences)

Merlin-null Schwann cells and schwannomas from an orthotopic allograft mouse model were analyzed after treatment of the Src inhibitor, dasatinib, for drug target modulation using western blotting and immunohistochemistry.

ZURIEL CARIBE**Effect of Tyrosine Nitration of Hsp90 Activity****Mentor:** Dr. Alvaro Estevez (Biomedical Sciences)

The objective of our research is to study and compare the effect of tyrosine nitration of Hsp90 activity to wild-type Hsp90 activity. Furthermore, my participation in said research aims to introduce and provide experience in the field of medical research.

THOMAS CARPINO**Unprotected Snakes: Always Use Genetics****Mentor:** Dr. Eric Hoffman (Biology)

This study is to examine the critically endangered key ringneck snake. This species is not federally protected, partly since it has not been studied at a molecular level. Thus, we collected 22 snakes from throughout Florida to test the nomenclature and shed light into future conservation implications for the species.

STEVEN CARRION**Determining Factors that Influence Smooth Cordgrass (*Spartina alterniflora* Loisel) Transplant Success in Community-Based Living Shoreline Projects****Mentor:** Dr. Linda Walters (Biology)

To increase *Spartina alterniflora* transplant success in community-based living shoreline projects, we examined the effects of cultivation salinity on growth and survival following transplantation to shore restoration sites. We also determined the effectiveness of plant-anchoring biodegradable mats and breakwaters (oyster bags) in facilitating re-establishment of transplants exposed to wave forces.

DIANA CARVEL**Interaction of P2X7 with HSP90 as Possible Involvement in Neurodegeneration****Mentor:** Dr. Alvaro Estevez (Biomedical Sciences)

Research has shown the involvement of HSP90 in neurodegeneration. This protein, often modified by nitration, may be interacting with a Fas pathway that induces motor death. We will be investigating this interaction using protein separation techniques that will not denature the entire complex.

JENNIFER CARVEL**Increased HIV Transmission Due to Production of Protein NF-Kappa B Induced by Bacterial Vaginosis****Mentor:** Dr. Alexander Cole (Biomedical Sciences)

This research seeks to discover the relationship between bacterial vaginosis and increased HIV transmission in the female reproductive tract.

DIEGO CASTILLO**Protein Disulfide Isomerase Prevents and Reverses the Fibrillization of Immunoglobulin Light Chain 6aJL2****Mentor:** Dr. Kenneth Teter (Biomedical Sciences)

Antibody light chain (AL) amyloidosis is the most common type of amyloidosis, which is caused by the buildup of AL amyloid fibrils (abnormal protein aggregates). The primary objective of this study is to determine if protein disulfide isomerase can inhibit and reverse the aggregation of the AL protein, 6aJL2.

LUKE CHANDLER**Repopulation of the Long-Spined Sea Urchin to Promote Coral Reef Restoration****Mentors:** Dr. Eric Hoffman, Dr. Linda Walters (Biology)

Microsatellite data was used to determine whether six south Florida and two broodstock populations of *Diadema antillarum* harbor different levels of genetic diversity. If they contain the genetic variation necessary to meet the FWC's genetic policies, reintroduction should be implemented as part of a comprehensive coral reef restoration strategy.

MICHELLE CHERNE**Characterization of *Mycobacterium tuberculosis* Hemerythrin-Like Protein Rv2633c****Mentor:** Dr. William Self (Biomedical Sciences)

Rv2633c is a protein of *Mycobacterium tuberculosis* that is upregulated during macrophage infection. It contains a hemerythrin-like domain that binds oxygen with a diiron oxo-bridge. This project aims to characterize the in vitro response of Rv2633c to conditions present in the macrophage lysosome.

ROSA CORONADO**Detecting Protein-Protein Interactions Involved in the Transport of an Essential and Ubiquitous Metabolite Required for Cellular Growth****Mentor:** Dr. Laurence von Kalm (Biology)

Polyamines are essential for life and can be obtained by biosynthesis or transport from outside the cell. Remarkably, the polyamine transport system is poorly understood in any multicellular organism. This project seeks to identify genes and proteins required for polyamine transport.

AMANDA COX**Improving Sensitivity and Detection Limits of Deoxyribozyme 10-23 Binary Sensor by Using DNA Antenna Tile****Mentor:** Dr. Dmitry Kolpashchikov (Chemistry)

The purpose of this experiment was to use DNA nanotechnology to optimize the reaction conditions around deoxyribozyme 10-23 binary sensor to improve its sensitivity and detection limits toward *Mycobacterium tuberculosis* and *Mycobacterium smegmatis*. This design and the results demonstrate the potential to improve efficiency for diffusion-limited enzyme-based sensors.

ANDI CUMMINS**Characterization of Interactors of *Plasmodium falciparum* PfPK6, an Atypical Protein Kinase****Mentor:** Dr. Debopam Chakrabarti (Biomedical Sciences)

This project focuses on the characterization and verification of proteins that have been shown to interact with *Plasmodium falciparum* protein kinase 6. Defining the protein-protein interactions occurring with PfPK6 will help to elucidate malarial signaling pathways and identify novel drug targets.

LIFE SCIENCES I CONTINUED

HOLLIS DAHN**Perspectives on Southwestern Biogeography: Evolutionary Implications of the Continental Divide for Two Desert Snakes***Undergraduate Co-Author:* Alejandra Osorio*Mentor:* Dr. Christopher Parkinson (Biology)

In this study we investigated the evolutionary histories of two snake species in the American Southwest in order to compare their responses to identical historical geographical and climatic influences as well as assess the degree to which these influences affect the current arrangement of lineages.

JOSEPH DEGU**Effects of Pelvic Movement on Digestive Breakdown of Chyme: A Study in Stomach Kinetics***Undergraduate Co-Author:* Bradley Kriznar*Mentor:* Dr. Mohtashem Samsam (Biomedical Sciences)

This research aims to determine if a relationship exists between pelvic kinetics upon digestive organs while in activity, thorough digestion, and clearing of a standardized chyme versus sedentary and recumbent test groups.

LIFE SCIENCES II

ERIN DRISCOLL**Validating Drug Targets Through Inhibition of Protein Interaction in *Mycobacterium tuberculosis****Mentor:* Dr. Kyle Rohde (Biomedical Sciences)

The objective of this project is to optimize the M-PFC assay used for measuring protein-protein interactions and to use this system to find potential drugs that can interrupt vital protein interactions in *Mycobacterium tuberculosis*.

CLARENCE EMILE**Integration of Cerium Oxide Nanoparticles into Silk Fibroin Matrices for Biological Applications***Mentor:* Dr. Sudipta Seal (Materials Science and Engineering)

The study aims at developing a smart combination of cerium oxide nanoparticles (CNPs) with polymeric silk fibroin nanostructures for wound healing and tissue engineering applications.

BAGGIO EVANGELISTA**Blood Brain Barrier-Penetrable Aptamer-Based Radio-Probe Targeting Alpha-Synuclein Oligomers for Early Diagnosis of Parkinson's Disease Using Positron Emission Tomography (PET)***Mentor:* Dr. Yoon-Seong Kim (Biomedical Sciences)

Analyzed the binding capabilities and specificity of a small ssDNA aptamer at the cellular and tissue level for applications in pre-Parkinsonian diagnosis using positron emission tomography.

CORINE FAEHN**Effects of Invasive Apple Snail (*Pomacea insularum*) on Aquatic Vegetation***Mentor:* Dr. Patrick Bohlen (Biology)

This project is researching the impacts of *P. insularum* freshwater ecosystems by observing how they alter the aquatic vegetation composition in a field experiment and lab feeding trial. I hope this research helps recognize the ability this invasive species has to alter its environment.

JEANINE GARCIA**Ponatinib Is a Potential Therapeutic Drug for Neurofibromatosis Type 2***Mentor:* Dr. Cristina Fernandez-Valle (Biomedical Sciences)

The project objective is to perform an in vitro preclinical study of Ponatinib for neurofibromatosis type 2 therapeutics. Using human Merlin-null Schwann cells as a cellular model, this research evaluates Ponatinib's molecular targets and identifies downstream signaling cascades that lead to decreased viability of tumor cells.

MICHELLE GAYNOR**Assessing Genetic Diversity Within Natural Populations of Smooth Cord Grass to Ensure Effective Restoration Efforts***Mentors:* Dr. Eric Hoffman, Dr. Linda Walters (Biology)

The main objective of my study is to evaluate the impact of current shoreline restoration efforts on genetic diversity of smooth cord grass, *Spartina alterniflora*, within the Indian River Lagoon (IRL). This study aims to identify a reliable method to ensure diversity is maintained in the long-term shoreline restoration efforts.

ALEXIS GHERSI**Characterizing the Neurodevelopmental Effects of Charcot-Marie-Tooth Disease in H304R Mice***Mentor:* Dr. Stephen King (Biomedical Sciences)

This project focuses on examining the role of mutant dynein protein in neurodevelopment and in the pathogenesis of Charcot-Marie-Tooth disease type 2O. We created a mouse model bearing the disease-causing mutation, and we examined cellular differences in the brains of wild-type and mutant mice via immunostaining and microscopy.

MIGUEL GIL**Understanding the Function of *Plasmodium falciparum* CDK-Like Kinase PfMRK***Mentor:* Dr. Debopam Chakrabarti (Biomedical Sciences)

Cyclin-dependent kinases are key regulators of the eukaryotic cell cycle and are known to be druggable targets. Although 6 CDK-like kinases have been identified in *Plasmodium falciparum*, their physiological functions are unknown. This study aims to characterize PfMRK, a conserved CDK-related kinase, by identifying its in vivo interactors.

LUCIA GONZALEZ-LLANOS**Regulation of the Membrane Lipid Aminoacylation Pathway in *Enterococcus faecium****Mentor:* Dr. Herve Roy (Biomedical Sciences)

The rakPGS gene in *Enterococcus faecium* confers resistance to an array of conditions, and although this gene has been characterized, little is known about the regulatory mechanism and environmental cues that trigger expression. Here, we perform sequence analysis and define these environmental cues triggering expression to address these disparities.

SAMUEL HARRIS**A Study on the Mechanism of Loss of Expression of MicroRNAs in Cell Lines Developed from Racially Disparate Patients***Mentor:* Dr. Ratna Chakrabarti (Biomedical Sciences)

My goal is to analyze the mechanism of epigenetic regulation of four microRNAs through assessing the pattern of methylation found in their respective promoter regions. I will be directly comparing the degree of methylation between African-American and Caucasian prostate cancer cell lines.

JARED HERBERT**The Role of Mulan E3 Ubiquitin Ligase in Mitochondrial Dynamics, Mitophagy, and Parkinson's Disease**

Mentors: Dr. Antonis Zervos, Dr. Lucia Cilenti (Biomedical Sciences)

Mulan protein is regulated by Omi serine protease in the mitochondrial intermembrane space. The exact mechanism of this regulation is unknown but is linked to the depolarization of the mitochondrial membrane potential. The goal of my research is to characterize the interaction between Mulan and Omi and its physiological function.

ABBY HUDAK**Long-Term Study of Dune Restoration Effects on Loggerheads (*Caretta caretta*) and Green Turtle (*Chelonia mydas*) Nesting Patterns**

Mentor: Dr. Kate Mansfield (Biology)

Analyzing the effects of beach restoration projects is vital to sea turtle nesting. Minimizing human impact on sea turtle nesting is crucial to their conservation.

PAIGE JAFFE**Does Plant Density Influence Growth of *Spartina alterniflora* and *Rhizophora mangle*? A Competition Study**

Mentor: Dr. Melinda Donnelly (Biology)

Plants compete for elements vital to growth and survival, such as sunlight, water, and nutrients. This study evaluated growth of *Spartina alterniflora* and *Rhizophora mangle* when grown in varying density combinations.

JACLYN JOHNSON**Done and Dusted: How Household Dust Can Aid in Criminal Investigations**

Mentors: Dr. Jack Ballantyne, Dr. Erin Hanson (Chemistry)

Dust bunnies are an overlooked source of forensic evidence. This project tests and evaluates dust components, particularly biological material (i.e., shed skin cells). Since DNA from these cells is often degraded, an evaluation of enhanced typing methods and alternative DNA markers was carried out to improve DNA profiling success.

SARA KHEDERZADEH**Bioengineering and Development of Exosomes for Expansion of Cytotoxic Natural Killer (NK) Cells for Cancer Therapy**

Mentor: Dr. Alicja Copik (Biomedical Sciences)

Develop the use of engineered exosomes, which are cell-derived vesicles, for the specific expansion of cytotoxic natural killer (NK) cells from peripheral blood mononuclear cells (PBMCs).

KRISTIN KRAMER**Wave Energy Dispersion on Restored Shorelines vs. Unrestored Shorelines**

Mentor: Dr. Melinda Donnelly (Biology)

The topic being researched in this study was how wave energy affects sediment erosion at shorelines that have been restored. A study was conducted where wave energy reduction at restored sites was observed. The wave energy was recorded before and after multiple types of restoration methods.

NICOLE LAMA**Nitrotyrosine and Peroxynitrite Formation in Breast Cancer Cells**

Mentors: Dr. Alvaro Estevez, Dr. Maria Franco (Biomedical Sciences)

Our research includes studying the effects that nitration inhibitors have on breast cancer cell proliferation, growth, and differentiation.

ANDREW LETTER**Refining Camera Trap Identification of Bobcats**

Undergraduate Co-Author: Jeremy McRae

Mentor: Dr. Gregg Klowden (Biology)

Having an accurate, reliable count of apex predator populations is a vital part of keeping ecosystems healthy and functioning. This project proposes to refine the ability to identify individual animals, using bobcats as the test subject. This refined method can be incorporated into future capture-mark-recapture studies of other animals.

CLARA LEUNG**Neuropeptides in Migraine Headaches**

Undergraduate Co-Author: Marvi Qureshi

Mentor: Dr. Mohtashem Samsam (Biomedical Sciences)

The scope of this project is to examine the release of calcitonin gene-related peptide (CGRP) during migraine headaches. We also look at drug candidates that can act as CGRP antagonists.

ZACHARY LOEB**The Impact of Endocrine-Disrupting Compounds Found in Wastewater Effluent on the Embryonic Development of *Oryzias latipes* (Medaka fish)**

Mentor: Dr. Donovan Dixon (Chemistry)

Endocrine-disrupting compounds (EDCs) entering the environment from manufacturing and municipal wastewater effluent impact the development, reproductive processes, and health of aquatic life. This project's overall objective is to evaluate EDC wastewater treatment methods, identify a new method of high potential, and determine the effectiveness of that method.

SANABEL MAHMOUD**Heat Shock Proteins as Quantifiable Stress Indicators in Bd-Infected Amphibians**

Mentor: Dr. Anna Savage (Biology)

I will work to establish a molecular assay for quantifying stress across a broad range of amphibian taxa using genetic expression of heat shock proteins. In standardizing this method, we can apply it in future amphibian disease studies to answer the question: How does environment and stress influence immunity?

MONICA MANSOUR**Role of Adrenergic Neurons in Motor Control: Examination of Cerebellar Purkinje Neurons in Mice**

Mentor: Dr. Steven Ebert (Biomedical Sciences)

The purpose of this project is to determine if there is a change in Purkinje cells between wild-type mice and Pnmt-ablated mice. Using immunohistochemistry, cells are quantitatively and qualitatively examined for variations. Understanding Pnmt mechanisms in the brain is imperative for elucidating and targeting key players in neurodegenerative disorders.

LIFE SCIENCES II CONTINUED

STEFFANY MEDINA**Wildlife Corridors: Assessing the Connectivity of Habitats in a Fragmented Landscape****Mentor:** Dr. Christopher Parkinson (Biology)

To determine how gopher tortoises are using corridors at Kennedy Space Center, movements along this habitat will be tracked and analyzed by calculating home ranges and distances traveled. Data will be compared to coastal tortoises and inland tortoises to determine if tortoises within these corridors function as residents or transients.

JAICE METHERALL**Shorebird Abundance, Diversity, and Behavior Relative to Human Population Numbers****Undergraduate Co-Authors:** Andrew Letter, Morgan Cooney, Justin Brown, Savannah Mulvey**Mentor:** Dr. Linda Walters (Biology)

To quantify how human population numbers affect shorebird abundance, diversity, and behavior along Central Florida beaches. The implications of this study should serve as a guide for future coastal management decisions.

JACQUELINE MEYER**Ecosystems in Peril: Cypress Domes at UCF****Undergraduate Co-Authors:** Amy Compare, Chelsey Sprouse**Mentor:** Ms. Jennifer Elliott (Biology)

This project collected data in UCF's six cypress ecosystems to measure the effects of urbanization on cypress recruitment. Number of juveniles and adults present, pH, water height, PSI, and other data were collected to establish a relationship between urbanization and cypress recruitment and propose a possible mechanism for this connection.

LIFE SCIENCES III

MEAGAN MINADIE**Mangrove-Herbivore Interactions in Mosquito Lagoon****Mentor:** Dr. Linda Walters (Biology)

To obtain a better understanding of the possible effects of mangrove-herbivore interactions on red, black, and white mangroves within Mosquito Lagoon in Canaveral National Seashore for the purpose of management of these threatened species.

BAILEY MOURANT**Finding Novel Tuberculosis Drugs that Target Essential Protein Interactions****Mentor:** Dr. Kyle Rohde (Biomedical Sciences)

My research focuses on the exploitation of essential protein-protein interactions in *Mycobacterium tuberculosis* as a nontraditional method of identifying novel drug targets for the treatment of tuberculosis.

AMNA NASER**Undercarboxylated Osteocalcin (ucOC) Supports a Role for *Mycobacterium avium* subspecies *paratuberculosis* (MAP) in Crohn's Disease****Mentor:** Dr. Saleh Naser (Biomedical Sciences)

Our study demonstrated that undercarboxylated osteocalcin (ucOC, a bone formation protein) is elevated in Crohn's disease (CD) cases associated with *Mycobacterium avium* subspecies *paratuberculosis* (MAP) infection. These findings may explain why CD patients have higher risk for developing osteoporosis.

KHOA NGUYEN**Screening for Anticancer Agents to Inhibit Mitotic Kinases and Proliferation of Metastatic Prostate Cancer Cells****Mentor:** Dr. Ratna Chakrabarti (Biomedical Sciences)

Series of synthetic compound libraries will be screened to identify inhibitors for the mitotic kinase, Aurora A kinase, which is shown to be overexpressed in metastatic prostate cancer cells.

MARIA ONATUNDE**Regulation of Energy Metabolism in Schwannoma-Related Cells****Mentors:** Dr. Cristina Fernandez-Valle, Dr. Maria Franco (Biomedical Sciences)

Neurofibromatosis type 2 is a disease characterized by mutations in the NF2 gene leading to formation of tumors in the nervous system. The aim of this project is to elucidate how the cells energy metabolism and oxidative phosphorylation are regulated in NF2 to favor tumor growth.

ALEJANDRA OSORIO**Evolutionary Relationships of the Snake Tribe Lampropeltini****Mentor:** Dr. Christopher Parkinson (Biology)

To determine the evolutionary relationships among the genera within the snake tribe Lampropeltini using nuclear and mitochondrial DNA and incorporating multiple phylogenetic approaches, including concatenation and coalescence to generate species trees.

ARSHIA PESSARAN**Identifying the Mechanism for the PM21 Stimulated Expansion of NK Cells****Mentor:** Dr. Alicja Copik (Biomedical Sciences)

To provide insight into the role of cytokines and other peripheral blood mononuclear cells (PBMCs) in the expansion of natural killer (NK) cells in order to identify the pathway by which the PM21 plasma membrane stimulated expansion is achieved.

CHRISTIAN PILATO**The Effects of Grain Size Distribution on Red Mangrove, *Rhizophora mangle*, Root Structure****Mentors:** Dr. Linda Walters (Biology), Dr. Kelly Kibler (Civil, Environmental, and Construction Engineering)

The goal of this project was to determine the role sediment grain size has on the development of red mangrove root structures and better understand its effects on mangrove recruitment. The results of this study will allow for individualized restoration efforts, with the goal of creating stable mangrove populations.

AARON POLLOCK**Elucidating the Scope and Regulation of Antibiotic and Macrophage Inducible whiB7 Regulon of *Mycobacterium tuberculosis*****Mentor:** Dr. Kyle Rohde (Biomedical Sciences)

Created various constructs related to the regulation and action of the whiB7 transcriptional activator. Clones include various reporters, overexpressors, and complementary constructs. Clones are then used under whiB7-inducing conditions to test whiB7's regulation of downstream virulence genes to determine its role in pathogenesis.

MARVI QURESHI**Evaluation of the Pathomechanism for Neuropeptide CGRP in Primary Headaches and Current Treatment Plans***Undergraduate Co-Author:* Mansoor Qureshi*Mentor:* Dr. Mohtashem Samsam (Biomedical Sciences)

The three phases of a typical migraine are researched with a focus on the neuropeptide CGRP. The pathophysiology of the migraine is analyzed in terms of the role of CGRP in migraine onset. Laboratory results are discussed for CGRP-related treatment plans.

RYAN RIDENBAUGH**Ground Beetles (Coleoptera: Carabidae) as Bioindicators in Pine Flatwoods Ecosystems***Mentor:* Dr. Joshua King (Biology)

The species richness and abundance of ground beetles will be examined in comparison to overall arthropod abundance to determine the effectiveness of ground beetles as bioindicators in pine flatwoods ecosystems.

ZACH RIVAS**Is a Bacteria Contributing to the Death of North American Frogs Concurrently Infected with a Fungus?***Mentor:* Dr. Anna Savage (Biology)

This study will explore a potentially lethal, multiparasitic relationship between a bacteria and a fungus, which in combination may be lethal in frogs. By quantifying both pathogens we can evaluate the infection dynamic by answering: Is the bacteria present in higher loads in frogs also infected with the fungus?

JESSICA SANDOVAL**Impact of Roosting Bats on the Urban Stormwater Quality of the UCF Campus***Mentor:* Dr. Patrick Bohlen (Biology)

A large bat colony roosting in an urban stormwater pipe provided an opportunity to examine the impact of roosting bats on stormwater quality. Total guano input and nutrient characteristics of bat guano were assessed along with the nutrient content of stormwater samples taken at the site.

MICHELLE SHAFFER**Evaluating Black Mangrove, *Avicennia germinans*, Northern Range Expansion Impacts on Shoreline Bird Communities Along the Eastern Coast of Florida***Mentors:* Dr. Melinda Donnelly, Dr. Linda Walters (Biology)

This study examines the impacts that the black mangrove northern range expansion along the eastern coast of Florida will have on shoreline bird communities. This data will help ecologists develop appropriate land management plans in preparation for the ecological and economical changes due to this shift in ecosystems.

DELANEY SHERWIN**Generation of iPSCs from ASCs Through Use of a Single-Gene Nanog Plasmid Vector***Undergraduate Co-Author:* Tyler Hosterman*Mentor:* Dr. Kiminobu Sugaya (Biomedical Sciences)

Enhanced generation of patient-specific induced pluripotent stem cells (iPSC) represents an important step toward the clinical use of stem cells to cure diseases and pathologies in medicine, and our research has sought to find a simpler, safer, yet more effective method to produce iPSCs from human adipose stem cells (ASC).

ASHELYN SIDDEERS**Expanding the Genetic Toolbox for Mycobacteria: Constructing the pheS Counterselection Marker***Mentor:* Dr. Kyle Rohde (Biomedical Sciences)

The goal of this project is to develop a novel counterselection marker utilizing the pheS gene to further enhance the mycobacterial gene knockout strategy used to study uncharacterized genes that may be linked to their virulence.

TYLER STUCK**SmartPhrog: A Long-Term, Active Bioacoustic Recording Solution Using Raspberry Pi for Frog Population Monitoring***Mentor:* Dr. Anna Savage (Biology)

To develop an intelligent bioacoustic monitoring system called SmartPhrog that can be field-deployed to record and store acoustic data for a period of at least four months.

KATRINA TECXIDOR**Sustainable Urban Gardening***Mentor:* Ms. Jennifer Elliott (Biology)

Our study explores what compost type will maximize plant growth while limiting nutrient leaching. The analysis section of our experiment involves a locally maintained farm plan. A projected location and size for this garden plot is a calculated space based on available areas on the grounds of UCF's Arboretum.

ALEXANDER TORRES**Determining Polyhydroxylated Fullerene Interactions with Amyloid-Beta 42 Oligomerization and Understanding Their Role in A β -Induced Oxidative Stress in Neural Stem Cells***Mentor:* Dr. Kiminobu Sugaya (Biomedical Sciences)

To understand the ways in which a fullerene derivative inhibits oxidative stress in human neural stem cells exposed to protein peptide amyloid-beta, a native gel was performed to study the effects on oligomerization. PCR for stem cell, glia, and neuron characteristic genes was performed along with toxicity assays.

TAINA TORRES**Predicting the Distribution of the Amphibian Pathogen *Batrachochytrium dendrobatidis* in Two Regions of the United States Using Species Distribution Modeling***Mentor:* Dr. Anna Savage (Biology)

A species distribution model will be created to identify areas in the southeastern and southwestern United States that have a high suitability for *Batrachochytrium dendrobatidis* (Bd). The model will provide new insight on the threat of Bd to amphibian biodiversity and identify geographic areas to focus on for pathogen studies.

LAHARI TUMULURI**Cardiac Consequences of Selective Adrenergic Cell Ablation in Mice***Mentor:* Dr. Steven Ebert (Biomedical Sciences)

To examine the potential cardiac consequences of selective adrenergic cell ablation. This will be done through analysis of echocardiography data from mice with genetic ablation of adrenergic cells over the first six months after birth. Evidence of adrenergic cell ablation heart will be characterized using histological and immunofluorescence staining.

LIFE SCIENCES III CONTINUED

RILEE WAGNER**Pancreatic Stellate Cells Secrete Increased Levels of IL-6 and IL-8 with Vitamin A Treatment***Undergraduate Co-Author:* Alexandra Stavros*Mentor:* Dr. Deborah Altomare (Biomedical Sciences)

We researched the interaction between vitamin A and two cytokines, IL-6 and IL-8, which are secreted from pancreatic cancer stellate cells. Results surprisingly stated that stellate cells treated with vitamin A showed an up-regulation of IL-6 and IL-8 secretion compared to stellate cells grown without vitamin A.

COLE WASHINGTON**Using a High Through-Put Screen to Discover Novel Genes Involved in the Polyamine Transport System***Mentor:* Dr. Laurence von Kalm (Biology)

This project focused on studying the polyamine transport system, which is poorly understood. A high throughput screen was used to identify novel genes in the polyamine transport system.

CHRISTOPHER YANICK**Movement of Gopher Tortoises with Relation to Railroad Tracks: Consequences of Anthropogenic Barriers for Terrestrial Species***Mentor:* Dr. Christopher Parkinson (Biology)

Utilizing radio-telemetry, this project will determine the frequency with which gopher tortoises' cross inactive railroad tracks at Kennedy Space Center. This information will be applicable for conservation efforts relating to the gopher tortoise and inform measures being taken to limit the anthropogenic impacts on their habitats.

KATELAN YAP**Identifying Riboswitch-Based Gene Regulation In *Borrelia burgdorferi*, the Causative Agent of Lyme Disease***Mentor:* Dr. Mollie Jewett (Biomedical Sciences)

Borrelia burgdorferi, the bacterium that causes Lyme disease, is transmitted to humans through the bite of infected black-legged ticks. This project is working toward identifying riboswitch-based gene regulatory mechanisms in this organism in order to better understand how *B. burgdorferi* can adapt in a mammalian and tick environment.

PHYSICAL SCIENCES AND
MATHEMATICS I**STEPHANIE ARMAS****Self-Reference Single Strip Paper-Based Sensors for Ion Detection***Undergraduate Co-Author:* Andrew Manhan*Mentor:* Dr. Karin Chumbimuni-Torres (Chemistry)

To develop a single strip paper-based ion-selective sensor with a reference membrane incorporated. This allows for an accurate, portable, and versatile sensor to participate in ion detection of biological and environmental samples. The analysis of these samples will provide a solution to underdeveloped countries with polluted drinking water.

ADRIAN ARNETTE**Theoretical Study of the Excitation and Ionization of Atoms in the Upper Atmosphere***Mentor:* Dr. Hari Saha (Physics)

The electron impact ionization of highly charged sulfur atoms was analyzed by using the most accurate multiconfiguration Hartree-Fock method, which includes the initial state electron correlation effects and interactions of equally shared energy by two final-state continuum electrons.

CAROLINE ARTEAGA**The Mechanochemical Synthesis of Alkaline Earth Metal Tantalates as a Catalyst for Green and Renewable Hydrogen Production***Mentor:* Dr. Richard Blair (Chemistry)

Our research has developed a simple mechanochemical method for alkaline earth metal tantalate synthesis. This material is used as a photocatalyst for water splitting to produce hydrogen gas. An energy-efficient process for calcium tantalate and magnesium tantalate synthesis was developed and optimized as a part of this work.

DANIEL BATISTA**Optimization of the Fabrication and Processing of Multiphoton Direct Laser Writing (DLW) and Development Process for Spatially Variant Photonic Crystals (SVPC)***Mentor:* Dr. Stephen Kuebler (Chemistry)

The optimized processing used to fabricate 3-D polymeric spatially variant photonic crystals (SVPCs) by multiphoton direct laser writing was demonstrated. SVPCs are 3-D nanostructures that can bend light beams through tight turns through the phenomenon of self-collimation.

ROBERT BAUER**Geodesics of the Projective Models for the Cayley-Klein Geometries of the Plane***Mentor:* Dr. Costas Efthimiou (Physics)

To compute the geodesics for the stereographic models of the Cayley-Klein geometries of the plane.

BROOKE BAYLESS**Single Nucleotide Substitution Analysis Using OC Sensors***Mentor:* Dr. Dmitry Kolpashchikov (Chemistry)

The objective of this research is to selectively detect a single nucleotide polymorphism within a target DNA analyte sequence using a multicomponent hybridization probe called "OC sensor." Two sense strands work cooperatively when binding to the analyte and a molecular beacon probe to produce a fluorescent complex.

AMANDA BINNION**Copper(I) Iodide for the Presumptive Illicit Drugs Identification for Law Enforcement***Mentor:* Dr. Richard Blair (Physics)

To improve the process of presumptive drug testing by using copper(I) iodide as a chemical indicator to presumptively identify illicit narcotics and other substances of abuse. Copper(I) iodide forms a luminescent cluster compound with alkaloids that can be analyzed by UV emission spectroscopy to ultimately identify drugs.

BRADLEY BROWN**A Rapid, Scalable Synthesis of Carbon Quantum Dots (CQDs) Using Mechanochemistry and the Analysis of Its Tunable Fluorescence Emission***Mentor:* Dr. Richard Blair (Physics)

The objective of the research project was to develop an alternative method for the large-scale production of carbon quantum dots that is energy efficient and cost effective.

MARIELENA BURDGE**Diffusion of Light in Disordered Materials***Mentor:* Dr. Aristide Dogariu (Optics)

We have investigated the effect of material structuring in light propagation by developing a technique using interferometry to characterize different regimes of light interaction. These techniques can be used to more accurately model energy transfer through disordered materials with applications such as energy harvesting and imaging biological tissues.

ALEX BURNSTINE-TOWNLEY**Metal-Organic Frameworks for the Separation of Polycyclic Aromatic Hydrocarbons***Mentor:* Dr. Fernando Uribe-Romo (Chemistry)

The metal-organic frameworks (MOFs) presented are a likely solution to the separation of polycyclic aromatic hydrocarbons (PAH). Incorporated into a chromatography procedure, the MOFs will separate the very similar aromatic compounds. Uniform and custom pore size, exposed π surfaces, and high-surface area contribute to the separation.

ANSON CARTWRIGHT**Design and Synthesis of Octupolar Molecular Building Blocks and Crystalline Covalent-Organic Framework Materials for Tunable Second-Harmonic Generation***Mentor:* Dr. Fernando Uribe-Romo (Chemistry)

Synthesis of molecular building blocks for crystalline porous covalent-organic frameworks that will be used in nonlinear optics applications.

DANIEL CERKONEY**Ultrafast Breakdown of the Insulating Phase in Bulk V_2O_3** *Mentors:* Dr. Volodymyr Turkowski, Dr. Talat Rahman (Physics)

We analyze theoretically the details of the metal-insulator transition in bulk V_2O_3 after the system is perturbed by an ultrafast (femtosecond) laser pulse excitation using the time-dependent density functional theory plus dynamical mean-field theory (TDDFT+DMFT) approach.

KATERINA CHAGOYA**The Synthesis of Delta Phase Molybdenum Nitride (δ -MoN) for Use as a Catalyst in Ammonia Production via Mechanochemical Methods***Mentor:* Dr. Richard Blair (Physics)

An innovative means of synthesizing delta phase molybdenum nitride was developed and optimized using mechanochemical methods. This material can prove to become an integral part of commercial ammonia production by reducing the energy input required for the process and thus decreasing the cost of production.

JENNY CHOY**The Search for Novel Naturally Occurring Organofluorine Compounds Through Lipophilic Extraction from Plants Near Prior Phosphate Mines in Central Florida***Undergraduate Co-Author:* Nathan Aleger*Mentor:* Dr. Seth Elsheimer (Chemistry)

The objective of this project is to attempt to find novel naturally organofluorine compounds. Understanding of organofluorine-containing compounds has been limited due to their rarity in nature. Discovery of a novel organofluorine compound allows for its application and development in clinical and agricultural research.

BURDLEY COLAS**Maximizing Power Density for Single-Mode Fiber Delivery***Mentor:* Dr. Axel Schülzgen (Optics)

The objective of this research was to design a single-mode fiber with maximized optical power density for a molecule trapping device. A single mode step-index fiber with 2.9 μm core diameter and index difference of 1.5 percent relative to the cladding index was found to be optimal.

CHRISTOPHER COLEMAN**Investigating the Quantum Properties of Individual Tunneling Electrons Within a Single Molecule Through the Application of Tunable Solid-State Devices***Mentor:* Dr. Enrique del Barco (Physics)

Diluted molecular solutions are deposited on the solid-state microchips, but I must also fabricate my own microchips. On these chips, by means of modern fabrication techniques, gold is evaporated onto the microchip perpendicular to previously evaporated aluminum strips then placed in an electric field when current is passed in an aluminum strip.

SEAN CRYSTAL**Development of a Compact Broadband Optical Parametric Oscillator for Ultrasensitive Molecular Detection***Mentor:* Dr. Konstantin Vodopyanov (Optics)

To develop and test the capabilities of a compact broadband optical parametric oscillator for ultrasensitive molecular detection in applications of combustion gas investigation and medical breath analysis.

KENNETH DUMAS**Growth of Few-Layer Molybdenum Disulfide Through Chemical Vapor Deposition***Mentor:* Dr. Saiful Khondaker (Physics)

Growth of molybdenum disulfide is to be achieved through the co-evaporation of molybdenum trioxide and sulfur precursors and the use of the chemical vapor deposition process. The resulting growth is to be confirmed and characterized through the use of optical microscopy, atomic force microscopy, and Raman spectroscopy.

DAVID FOX**Solvent Annealing of Organic Nanowires on Graphitic Surfaces***Mentor:* Dr. Lei Zhai (Chemistry)

Growth methods for low-dimensional organic crystals are currently being researched for low-cost and flexible electronics. Graphene, a carbon monolayer with a 2-D honeycomb structure, has been highlighted for its impressive electronic, optical, and mechanical properties. The directed growth of organic polymers can be nucleated from graphitic surfaces and was explored.

PHYSICAL SCIENCES AND MATHEMATICS I CONTINUED

RUSSELL FRANK**Color-Changing Surfaces Enabled by Liquid-Crystal Plasmonics***Mentor:* Dr. Debashis Chanda (Optics)

Liquid crystal-plasmonic systems as dynamic color-changing surfaces for camouflage and display applications.

LAUREN GANDY**A Combined Method of Detection for Organic and Inorganic Gunshot Residue***Mentor:* Dr. Candice Bridge (Chemistry)

I identified organic color spot tests with targets relatively specific to materials in gunshot residue; evaluated the intensity of their color reaction and limits of detection with standards, mixtures, and field samples; and visualized these samples post-spot test under an SEM-EDX to see the effect on the inorganic particulates.

ZACHARY GELINAS**Transfunctions***Mentors:* Dr. Piotr Mikusinski, Dr. Heather Edwards (Mathematics)

The research I am conducting generalizes the notion of mappings between spaces of measures. These mappings are called transfunctions. I am examining the various conditions that can be used to characterize these mappings and examples therein.

STEVEN HELLER**Modulation of Cerium Oxide Surface Chemistry in EPD Coatings to Maximize Antioxidant Capacity***Mentor:* Dr. Sudipta Seal (Materials Science and Engineering)

Through research it has been shown that altering the way that cerium oxide is coated on titanium plates can change the surface chemistry. In a series of experiments this research will aim to control the surface chemistry of the coated cerium oxide.

DAVID HERNANDEZ FUNES**Quantification Analysis Using Direct Analysis in Real-Time Mass Spectrometry (DART-MS)***Mentor:* Dr. Candice Bridge (Chemistry)

Direct analysis in real-time mass spectrometry is a new analytical instrument that allows for rapid and simple analysis of pure substances and mixtures. This instrument provides a mass spectrum for every component in a sample. This project's objective was to develop a method that allows for quantification using DART-MS.

COURTNEY HULCE**Optimization of Zinc Microsensor for Use in the Determination of Zinc Ion Concentration for Agricultural Applications***Undergraduate Co-Author:* Wynstona Louis*Mentor:* Dr. Karin Chumbimuni-Torres (Chemistry)

The primary research objective is to develop and apply an innovative zinc ion-selective microsensor that offers an unprecedented level of specificity and sensitivity required for the rapid detection of zinc ions in biological samples for environmental applications.

JEFFERY JORGES**Collision of Dual Aggregates (CODA): Understanding Planet Formation Through Experimental Observations of Low-Velocity Collisions***Mentors:* Dr. Adrienne Dove, Dr. Joshua Colwell (Physics)

The Collision of Dual Aggregates (CODA) is a laboratory experiment designed to simulate the low-velocity collisions that are involved in early planet formation and planetary ring systems. The results of this experiment help to construct a better empirical model of the collisional outcomes within a range of different parameters.

MATTHEW JULIAN**Quantification of Non-Stoichiometry in Transparent Ceramics Using Laser-Induced Breakdown Spectroscopy***Mentor:* Dr. Romain Gaume (Optics)

Investigate the potential of laser-induced breakdown spectroscopy (LIBS) for stoichiometry assessment in the fabrication process of transparent ceramics in order to improve their optical properties.

JESLIN KERA**Microspectroscopy of Bioassemblies at the Single-Cell Level***Mentor:* Dr. Alfons Schulte (Physics)

The goal is to characterize biological assemblies in minuscule quantities and at the single-cell level nondestructively using microspectroscopy.

SHELBY KHANDASAMMY**Analysis of Bullet Transfer onto Bone Using LIBS***Mentor:* Dr. Michael Sigman (Chemistry)

Laser-induced breakdown spectroscopy (LIBS) is a useful technique in deducing the elements that make up a sample. This project will investigate the potential use of LIBS in detecting the elements transferred onto bone from bullets of various types.

ALI KHATER**Chemical Methods for Tuning the Optical Properties of Fluorescent Graphene Oxide Quantum Dots***Mentor:* Dr. Lei Zhai (Chemistry)

I controlled the optical properties of graphene oxide quantum dots through modification of synthesis parameters.

MAXIMILIAN KOOPMAN**Theoretical and Computational Investigation of Photoionization Processes with Atoms and Molecules***Mentor:* Dr. Hari Saha (Physics)

Determine the excitation and ionization cross sections of atomic aluminum using a highly accurate and sophisticated method known as the multiconfiguration Hartree-Fock method.

NICHOLAS KOSAN**Controlling Light with Spatially Variant Photonic Crystals and Waveguide Structures***Mentor:* Dr. Stephen Kuebler (Chemistry)

Spatially variant photonic crystals (SVPCs) can be utilized to reduce the attenuation of signals compared to waveguide structures. SVPCs and waveguides are created through multiphoton lithography in SU-8 and are characterized both structurally and optically.

PHYSICAL SCIENCES AND MATHEMATICS II

ISABELLE KRAUS

Harmonic Analysis of a Cantor Set

Mentor: Dr. Dorin Dutkay (Mathematics)

We studied some number theory problems related to the harmonic analysis of a Cantor set and continued generalizing ideas about relations between number theory and spectral measures.

KELSI KUEHN

Elemental Analysis for Source Attribution in Forensic Anthropology

Mentor: Dr. Matthieu Baudet (Chemistry)

Forensic anthropology requires the classification of questionable fragmentary materials. The relatively unexplored use of laser-induced breakdown spectroscopy (LIBS) for elemental analysis in the field of anthropology is explored for rapid identification of osseous/dental fragments as well as their identification as human or nonhuman.

CRISTIAN LACERA

Exploring the Volume of Heterogeneous Materials with Nanoscale Precision

Mentor: Dr. Laurene Tetard (Physics)

The objective of this project is to understand the different effects caused by polystyrene (PS) and polycaprolactone (PCL) thicknesses on the frequency shift, amplitude, and phase variations of the signals used for AFM-based subsurface imaging.

DIANA LOPEZ

Theoretical Study of Chromophores for Biological Sensing: Understanding the Mechanism of Rhodol-Based Multichromophoric Systems

Mentors: Dr. Hector J Rivera Jacquez (Optics), Dr. Artem Masunov (Chemistry)

In order to aid in the effort of finding novel optical sensors for biological systems, theoretical methods are used to predict the optical properties of multichromophoric systems consisting on rhodol and aza-crown components. After understanding the properties we aim to design optimized metal sensors for biological systems.

SAMANTHA MENSAH

A Mesogenic Oligomer with Alternating Electron Acceptor and Donor Units for Organic Electronic Applications

Mentor: Dr. Fabrice Mathevet (Chemistry)

Key requirements in the progress of materials for organic electronics include better charge transport properties and more stable, well-aligned organization of the supramolecular structure. The conjugated oligomer presented is a good candidate to form highly ordered supramolecular structures and offers promising solution processing capabilities.

TATIANA MOLDEN

OC Sensor for Detection of DNA Methylation Sites

Mentor: Dr. Dmitry Kolpashchikov (Chemistry)

This project is focused on using multicomponent molecular sensor (OC sensor) for detection of DNA methylation sites. DNA containing 5-methyl cytosine was shown to form more stable base pairs with complimentary probes. Therefore we expect binding of OC sensor to DNA containing 5-methyl cytosine with greater affinity than unmodified DNA.

NICOLE MRVOS

The Mechanochemistry of Propane Using Recycled Biomass for Renewable Energy

Mentor: Dr. Richard Blair (Physics)

The commercialized method to receive propane is to collect it as a byproduct of oil refining. In this experiment, we analyze our synthesis of propane from a naturally occurring source and identify the implications it has for the alternative fuel market.

MICHAEL NAVARRO

Synthesis of Few-Layered Halogenated Graphene for Metal-Air Fuel Cells

Mentor: Dr. Richard Blair (Physics)

My research involved the synthesis of halogenated graphene, which will offer the potential for enhanced metal fuel cells. In the process, I constructed metal fuel cells using halogenated graphene as the oxygen-splitting catalyst and evaluated the lifetime and electrochemical properties of the fuel cells.

WESLEY NEWSOME

Aniline-Containing Metal Organic-Frameworks with Redox Activity and Strong Dipoles

Mentor: Dr. Fernando Uribe-Romo (Chemistry)

The purpose of this research is to design and synthesize aniline-containing porous metal-organic frameworks that contain strong dipoles and are redox active to work as cathode materials in high-power lithium-ion batteries.

ETHAN PEP MILLER

The Effects of Nanopores on Ionic Current

Mentor: Dr. Lee Chow (Physics)

In this project we researched the effects of varying pore sizes, electric potential, and concentration on ionic currents running through a nanopore. This serves as a preliminary investigation for the detection and identification of nano-objects in a solvent.

JEFFER PINZON

Signal Amplification of a Highly Selective Universal MicroRNA Electrochemical Sensor for Single Nucleotide Polymorphism Detection

Mentor: Dr. Karin Chumbimuni-Torres (Chemistry)

The electrochemical four-way junction nucleic acid sensor was developed to detect microRNAs (miRNAs) and single nucleotide polymorphisms (SNPs), which have been proven to be potential diagnostic biomarkers for many human malignancies such as breast cancer and Alzheimer's disease.

COURTNEY POWELL

Development of a Colorimetric Assay for Sex Determination in Ancient DNA

Mentor: Dr. Dmitry Kolpashchikov (Chemistry)

This research aimed to create a molecular sensor to recognize a fragment of the amelogenin gene and distinguish between the X-allele and Y-allele for sex determination.

NOOR FATIMA QADRI

Enhancement of Ultraviolet Upconversion Emission Using Plasmonic Nanocavities

Mentor: Dr. Mercedeh Khajavikhan (Optics)

To enhance the emission of ultraviolet (UV) light through near-infrared (NIR) upconversion by trapping nanoparticles into uniquely designed plasmonic cavities. If accomplished, such innovations could lead to numerous applications in the field of biological sciences, such as drug delivery in medicine, bioimaging, and solar cells.

PHYSICAL SCIENCES AND MATHEMATICS II CONTINUED

JOSHUA RABANAL**Micro-Raman Spectroscopy of Electrochemically Grown Polymers and Incorporation of Lead****Mentor:** Dr. Alfons Schulte (Physics)

The characterization of the incorporation of lead with electrochemically grown poly(3-methylthiophene).

ANA ROSARIO**iPURE: Interdisciplinary Physics Undergraduate Research Explorers****Undergraduate Co-Authors:** Yasmine Lanham, Ashley Gramajo, Rawan Almousa, Han Le, Claudia Ragosta**Mentors:** Dr. Ahlam Al-Rawi, Dr. Abdelkader Kara, Dr. Laurene Tetard, Dr. Alfons Schulte (Physics)

Exploring interdisciplinary research utilizing physics in a biological realm.

KAMRY SAMUEL**Electrochemical Determination of Hybridization Kinetics on a Two-Way Junction DNA Sensor****Mentor:** Dr. Karin Chumbimuni-Torres (Chemistry)

Alternating current voltammetry and cyclic voltammetry will be used to determine an efficient method for analyzing nucleic acids on a two-way junction electrochemical DNA sensor.

DANIEL SEGA**An Analysis of Bending Waves in Saturn's Rings****Mentor:** Dr. Joshua Colwell (Physics)

In order to gain a better understating of Saturn's ring-moon system we developed a program that simulates the dimming of starlight as it traverses Saturn's rings. The results from these simulations are to be compared with data received from Saturn's orbiter *Cassini*.

JOSEPH SLEPPY**Use of Perovskite to Develop Flexible and Semitransparent Energy-Generating Solar Cells****Undergraduate Co-Author:** Caleb Morrison**Mentor:** Dr. Jayan Thomas (Optics)

To develop a flexible and semitransparent solar cell using PEDOT:PSS, perovskite, and PCBM. We expect a performance conversion efficiency of 7 percent to 9 percent and a voc of -0.8V. Such performance is enough for practical demonstrations such as lighting an LED or running a small electric motor.

ANGELIQUE SOLANO**Characterizing Condom Lubricants Using Direct Analysis in Real Time-Mass Spectrometry****Mentor:** Dr. Candice Bridge (Chemistry)

Condoms are prepackaged and normally have personal lubricant present on the rubber for ease of insertion. Identifying the concentration of main components of these lubricants, i.e., polydimethylsiloxane, polyethylene glycol, and nonoxynol-9, will aid in the identification of unknown condom lubricants during sexual assaults in the absence of a known comparison.

OSCAR TARANO**Iodinated Metal-Organic Frameworks for the Separation of Gases in Spent Nuclear Fuel****Mentor:** Dr. Fernando Uribe-Romo (Chemistry)

This project aims to produce metal-organic frameworks (MOFs) capable of separating gases from radioactive waste by functionalizing them with electronically soft substituents. Our current efforts focus on the syntheses of organic linkers containing large amounts of iodine along with the preliminary stages of crystallizing the MOFs.

RONDEL THORPE**A Highly Scalable and Stereoselective Synthesis of L-Allo-Enduracididine****Mentor:** Dr. Yu Yuan (Chemistry)

To address the challenge of creating a highly stereoselective method for setting the C3-chiral center of the unnatural amino acid L-allo-enduracididine.

NIKIA TOOMEY**Synthesis and Characterization of Fluorescent C-13 Derivatives of Podocarpic Acid****Mentor:** Dr. Delbert Miles (Chemistry)

The goal of this research was to prepare and characterize novel fluorescent C-13 derivatives of podocarpic acid, a natural conifer resin, for possible application in bioimaging, specifically fluorescence microscopy.

TYLER TOWNSEND**Exploration of the Temperature Dependence for Spin Pumping in a Superconducting Niobium Thin Film****Mentor:** Dr. Enrique del Barco (Physics)

This study investigates the spin dynamics of superconducting thin films. An experiment is carried out using superconducting niobium by spin pumping below and above the superconducting regime in an attempt to understand the spin transport mechanisms in these devices.

CONRAD TROHA**Effect of Uniaxial Strain on Band Structure of Multilayer WS₂****Mentors:** Dr. Talat Rahman, Dr. Duy Le (Physics)

I wanted to see what would happen to the band structure of a multilayer tungsten disulfide structure after applying a one-dimensional strain. I built a virtual model and ran calculations using Python. I found that WS₂, under strain, becomes more like a direct band gap material for higher photoluminescence.

JOHN VASTOLA**The Effect of Impurities on the Superconductivity of BSCCO-2212****Mentor:** Dr. Richard Klemm (Physics)

BSCCO-2212 is a high-temperature superconductor whose electronic structure is poorly understood. I worked on quantum field theoretic calculations to elucidate it. These calculations are consistent with experimental evidence on this topic.

JACQUELINE WILLIAMS**The Structural Basis of Neurotoxicity of Alzheimer's Amyloid β Peptide****Mentor:** Dr. Suren Tatulian (Physics)

The aim of this research is determine the structural basis of neurotoxicity of Alzheimer's Amyloid β Peptide. Additionally, the soluble oligomers of Amyloid β Peptide can be causatively linked as an alternative source of neurotoxicity as opposed to Amyloid β Peptide fibrils that form senile plaques as the source.

MARCY YI**Nanoscale Studies of Polymer by Novel Microscopy Techniques***Mentor:* Dr. Laurene Tetard (Physics)

The objective of this study is to examine the influence of thickness on the nanoscale properties of polymer films using both atomic force microscopy (AFM) and mode-synthesizing atomic microscopy (MSAFM) techniques to establish new correlations between the variations in MSAFM signal and the sample properties.

SOCIAL SCIENCES I**SARA ADAMS****How Trauma Paves Your Road Through Life: Reflections from Holocaust Survivors on Meeting Erikson's Stage of Integrity vs. Despair***Mentor:* Dr. Ana Leon (Social Work)

While many survived, we know little about the impact that the Holocaust has had on their later years. This study aims to study the perceptions of Holocaust survivors on how the Holocaust experience has affected their ability to resolve Erikson's final stage of development crises experienced during integrity versus despair.

GRISELDA ALAVEZ**Rumination and the Effect of Directed Forgetting on Emotional Stimuli***Mentor:* Dr. Valerie Sims (Psychology)

Looking at individual differences, we will replicate a study based on people's tendency to ruminate and the ability to forget emotional material as directed. The results will be examined to discover how much of an impact rumination and personal differences have on memory.

ISMAR ALBURQUERQUE**The Relationship Between Political Attitudes and Cynicism***Undergraduate Co-Author:* Hannah Elmtiou*Mentor:* Mr. Jason Chesnut (Psychology)

This study's purpose is to examine the relationship between cynicism and political attitudes. It is hypothesized that higher levels of cynicism will correlate with conservative political attitudes due to conservatives valuing tradition and disliking change. This research may allow individuals to better understand and relate to those who differ politically.

ALESIA ALBURY**Locus of Control as a Function of Age, Gender, and Ethnicity***Mentor:* Dr. Doan Modianos (Psychology)

This study determined whether age, gender, and ethnicity are variables that can correctly predict whether one views themselves as being in total control, whether others hold all the power, or if there is a higher deity that has already planned our lives out for us.

KATE BARBER**Think About It: Journaling Prompts that Encourage Participants to Think Are Better at Alleviating Stress***Undergraduate Co-Authors:* James Oskam, Maggie Harding, Allison Long*Mentor:* Dr. Shannon Whitten (Psychology)

Expressive writing has been researched extensively, and benefits have been demonstrated for many circumstances, including physical and emotional trauma. The present study expands these findings by directly comparing different writing prompts. Furthermore, personality and the effects of short-versus long-term writing were investigated.

VICTOR BASSEY**Physics in the Wild: Developing Augmented Reality Tools for Education***Mentor:* Dr. Joseph LaViola (Electrical Engineering and Computer Science)

We created an application using the Unity 3-D game engine to assist teachers in reinforcing physics concepts for students. The application allows students to interact with and visualize different fundamental physics concepts, like kinematics, while simultaneously being able to observe the physics equations, assisting in the learning and understanding process.

CHRISTY BOX**Work, Study, Save an Endangered Language***Mentor:* Dr. Beatriz Reyes-Foster (Anthropology)

My research project analyzed whether support and inclusion of endangered languages in linguistically dominant institutions such as universities and businesses positively affects the societal perception of endangered languages.

MORGAN BRAWNER**Sustainability: Stewardship or Conformity? A Case Study of Sustainability Strategy Implementation in Green Universities Nationwide***Mentor:* Dr. Claire Knox (Public Administration)

This project analyzes sustainability programs implemented by universities in the United States that are ranked in the top 10 greenest schools for sustainable initiatives and environmental awareness. The research aims to benchmark the effectiveness of these programs and to advise future sustainability efforts among colleges, universities, and small cities.

DEVIN BURNELL**Antecedent and Consequences of Right-Wing Authoritarianism and Social Dominance Orientation in the Workplace***Mentor:* Dr. Doan Modianos (Psychology)

Right-wing authoritarianism and social dominance orientation are ideologies related to prejudice, group cohesion, and hierarchy favoring. The question driving this research is: How do these ideologies relate to workplace consequences such as bullying, vocational selection, leader style preference, and organizational commitment? Our objective is to investigate these ideologies and implications for organizations.

NOEL CAL**Gender Differences in Eyewitness Recall***Undergraduate Co-Author:* Natallia Machecha*Mentor:* Dr. Mustapha Mouloua (Psychology)

This study examines how leading and nonleading questions affect the number of recalled details between men and women. The study aims to support prior research that indicates a difference and re-examines how suggestive details impact recall.

SOCIAL SCIENCES I CONTINUED

SIMONE CAMACHO**Attitudes Toward Human Papillomavirus (HPV) Vaccine Among Genders***Mentor:* Dr. Charles Negy (Psychology)

I will compare attitudes toward the HPV vaccine to determine if one gender is more open to the vaccination. And I will measure three indices of rational thinking: (1) appreciation of science, (2) religiosity, and (3) magical thinking, to determine their ability to predict resistance to the HPV vaccine.

LUIS CAMPOS**The Bismarck Model: A Comparative Analysis of German and Japanese Political Process and Implementation***Mentor:* Dr. Anca Turcu (Political Science)

This research compares the effects of different political processes on the implementation of progressive social and mental health policy within Germany and Japan.

BRACH CHAMPION**Correcting Medicaid Underreporting by the Current Population Survey: A Stochastic Frontier Analysis***Mentor:* Dr. Richard Hofer (Economics)

The current population survey is cheaper, easier, and the most widely cited source of estimation of Medicaid enrollment, but it's inaccurate. We will correct this inaccuracy using a stochastic frontier to predict the true value of Medicaid enrollment.

REBECCA CHAPPELL**An Examination of the Extent to Which Word Work with Elementary Students Transfers to Authentic Reading and Writing Practices***Mentor:* Dr. Andrea Gelfuso (Teaching, Learning, and Leadership)

The objective of this study is to create a new understanding about word work to enable educators to more effectively teach phonics so that word work instruction does transfer to authentic reading and writing practices.

EMILY CHESLEY**Let's Get Physical***Mentor:* Dr. Grace White (Psychology)

The primary goal(s) of this study are to: (1) Examine the relationship between physical activity and relationship satisfaction, and (2) examine how personality relates to physical activity and relationship satisfaction.

NICOLE CHUDY**Performance of Basis Peak and Microsoft Band 2 During N-Back Task: A Validity and Reliability Study***Mentor:* Dr. Daniel McConnell (Psychology)

The objective of this study is to validate fitness-tracking devices as an alternative to ECG and thus make the inclusion of physiological data in psychological research more accessible.

LUCY CLEMENT LA ROSA**The Significance of Narcoterrorism in Counterterrorism***Mentor:* Dr. Houman Sadri (Political Science)

"The Significance of Narcoterrorism in Counterterrorism" presents research on the relationship between narcotic traffickers and terrorist organizations. The relationship is analyzed in the context of terrorism's evolution over the past several decades. The research analysis is used to demonstrate the significance of the relationship in present-day counterterrorism strategies.

MONIQUE COHN**Examining the Roles of a School Psychologist in Collaboration with Early Educators***Mentor:* Dr. Kelly Jennings-Towle (Teaching, Learning, and Leadership)

The goal of this study is to examine the roles of current school psychologists, their collaborative work with early intervention, and need for further supportive measures. The researcher realized the imperative position that a school psychologist is in and the need to define the role for this occupation.

ASHLEY CRAIG**Empowerment Unit Plan for Haitian Restavek Children***Mentor:* Dr. Lee-Anne Spalding (Teaching, Learning, and Leadership)

"Restavek," French for "one who stays with," describes the situation of slave children in Haiti. The majority of these children are young females without access to education or family. This research demonstrates how empowering and educating these 8- to 12-year-old girls provides them with an opportunity for a better life.

TARALEIGH DAVIS**Kazakhstan: From the Leftovers of a Dissolved Empire to Regional Power***Mentor:* Dr. Houman Sadri (Political Science)

This project will present a comparative analysis of ethnic-government relations, economy, and foreign policy in the former Soviet Republics of Kazakhstan, Georgia, and the Ukraine. This project will also compare these countries in regard to political stability, highlighting the importance of peace to combat growing concerns for global terrorism.

WILLIAM DEAN**Policy Evolution in Costa Rica: The Road to Sustainable Ecotourism***Mentor:* Dr. Peter Jacques (Political Science)

I researched how Costa Rica altered its domestic economic policy to include environmental management and sustainable development. More specifically, I investigated how policymakers, grass-roots organizations, and nongovernmental organizations influenced this monumental policy change that resulted in the creation of a world-renowned ecotourism industry.

TASHANDA DENNISON**A Different World***Mentor:* Dr. Amy Donley (Sociology)

Using a sample of over 300 adults, this study examines peoples' perceptions regarding the current state of race relations within the U.S. Specifically, respondents were asked if they think that substantial progress has been made since the 1964 civil rights movement.

JULIE DESLAURIERS

A Two-Way Rescue? College Students' Perceptions of Pet Adoption and the Effect an Animal Has on Overall College Experience

Mentors: Dr. Linda Walters (Biology), Dr. Amanda Anthony (Sociology)

The objective of this research study is to view college students' perceptions of animal overpopulation and pet adoption. The study will also see if having a pet in college affects student GPA, leadership, extracurricular involvement, and overall college satisfaction.

DAVINA DHANI

The Impact of Time Orientation on Consumers' Online Reviews and Perceptual Value

Mentor: Dr. Ze Wang (Marketing)

The objective of this course of study was to examine the potential influence of temporal orientation on consumer perceptions of product value and content emotionality.

SHIRLEY DORSAINVIL

Does Distance Matter?: Predictors of Infidelity and Jealousy in Geographically Close vs. Long-Distance Romantic Relationships

Mentor: Dr. Grace White (Psychology)

This current study aims to examine differences in relational uncertainty, relationship satisfaction and quality, personality traits and attachment styles, and attitudes toward infidelity and jealousy among individuals in long-distance relationships (LDRs) versus geographically close romantic relationships (GCRs) in order to alleviate the concerns for couples interested in LDRs.

H. CHRISTOPHER ECKSTEIN

Generation Rated X: Personality Traits, Sexual Attitudes, and the Effects of Sexually Explicit Media on Attraction Among Men

Mentor: Dr. Grace White (Psychology)

The current study examines the effects of pornography on males when rating unknown women on attractiveness in a one-group pretest-post-test design. The influences of personality traits and sexual attitudes are also investigated for meaningful interactions with the degree of desensitization after SEM exposure.

KRISTEN ELLIOTT

Student Engagement in the Marketing Major

Mentor: Dr. Carolyn Massiah (Marketing)

During my undergraduate research with Dr. Massiah, we brainstormed ways to get students in the marketing degree more involved. Through our research, we analyzed what students like and dislike about the major and what their preferences are on how to learn and apply classroom knowledge beyond graduation.

ALYSSA FINNER

Transdiagnostic Exploration of Psychiatric Symptoms Related to Misattribution Errors to Neutral Faces

Mentor: Dr. Jeffrey Bedwell (Psychology)

Several studies have demonstrated misattribution of emotion to neutral facial expressions among individuals with psychotic disorders. The present study aimed to identify particular transdiagnostic symptoms that relate to this abnormality. Findings from this study inform treatment for social cognition deficits in these disorders, which may lead to improved functional outcomes.

DAVID FORESMAN

Representations and Impacts of Transgender and Nonconforming Ideals in Children's Literature

Mentor: Dr. Sherron Roberts (Teaching, Learning, and Leadership)

A content analysis of children's literature that contains a strong transgender and/or gender-nonconforming character. Trends, themes, and characteristics will be annotated and compared.

KIARA GARCIA

Exploring Dentists' Readiness to Work with Individuals with Disabilities

Mentor: Dr. Maria E. Reyes (Child, Family, and Community Sciences)

Qualitative and quantitative research methods will be utilized to complete the study. Self-perceived efficacy patterns are analyzed at two different stages. First, an analysis of the curriculum of the three dental schools in Florida followed by a modified questionnaire instrument surveying undergraduates pursuing a career in dentistry and current dental students.

MEGAN GINN

A Comparative Study: Kazakhstan, Uzbekistan, and the Politics of Domestic Violence

Mentor: Dr. Houman Sadri (Political Science)

The objective of this study is to assess women's rights in Central Asia. This study analyzes how each government has directly resuscitated the practice of domestic violence and what they are doing (or a lack thereof) to combat it.

SOCIAL SCIENCES II

MELISSA GOMEZ

Stable Isotope Analysis of the Extracted Collagen from the Bahamian Hutia; Determining Role in Indigenous Agricultural Development

Mentors: Dr. Pete Sinelli, Dr. Lana Williams (Anthropology)

Through the careful extraction and isotopic analysis of both collagen and dentin from the Bahamian hutia (*Geocapromys ingrahami*), we are attempting to provide insight into its role in the subsistence developments of the indigenous peoples of the Caribbean archipelago.

EMILY GONZALEZ-HOLLAND

Prosocial Behavior and Teamwork Outcomes in Serious Training Games

Mentor: Dr. Clint Bowers (Psychology)

In this presentation I provide a theoretical analysis of the prosocial behavior literature in conjunction with its application toward team training and serious games. I attempt to bridge the gaps in the prosocial behavior literature by providing theoretical guidelines using a common learning model.

RYAN HAMMOND

Parks as Places of Solace: The Perceived Value of Public Parks After 9/11

Mentor: Dr. Peter Jacques (Political Science)

I researched into how parks are viewed and utilized after large-scale traumatic events by selecting a specific case (9/11 in New York), coding newspaper reporting on parks, and quantifying the themes in order to draw conclusions. My goal was to increase our understanding of how and why people use parks.

SOCIAL SCIENCES II CONTINUED

MARVIN HOO**The Relationship Between Education, Self-Esteem, and Body Image***Mentor:* Dr. Mustapha Mouloua (Psychology)

This research project explored the concept of education and the relationship it may have on self-esteem and body image.

TENESHIA HUGGINS**Mentoring Future UCF STEM Scholars Through the UCF NSF ICubed Project (Innovation Through Institutional Integration I3)***Mentors:* Dr. Vassiliki Zygouris-Coe (Educational and Human Sciences), Dr. Parveen Wahid (Electrical Engineering and Computer Science)

To develop a STEM pathway for high school students that engages them in learning about STEM research in UCF research labs and equips them with relevant experiences and knowledge about STEM college studies and future related careers.

CRISTINA HYMAN**Giving Up Our Pets: How Pet Owners' Attitudes Toward Animals Relate to Pet Relinquishment***Mentor:* Dr. Elizabeth Grauerholz (Sociology)

Pet relinquishment occurs when ownership of a pet is transferred to a shelter organization. This study explores the relationship between pet owners' cultural orientations toward animals and pet relinquishment; specifically comparing how owners who relinquish their pets differ from nonrelinquishers in their attitudes toward their pets and animals in general.

ANDREI IRIMIA**The Shadow Rate and Its Effect on U.S. Assets and Bank Balance Sheets***Mentor:* Dr. Uluc Aysun (Economics)

This thesis seeks to determine the effect that the shadow rate, as presented in research by Wu and Xia, has had on U.S. asset prices and bank balance sheets in the period of 2010-15.

VINCENT IULA**Free to Be Accountable: Extended Self as a Moderator of Cheating Among Those Primed with Determinism***Mentor:* Dr. Shannon Whitten (Psychology)

Prior research has shown that reading primes relating to determinism results in more anti-social behavior and more consequentialist views on justice. For the current research it is hypothesized that the introduction of a prime that extends the notion of self beyond that which we normally intuit will moderate these effects.

KATIE KENNIE**Through the Eyes of the Child***Mentor:* Dr. Steven Saunders (Psychology)

A study of the patient files of Dr. Saunders in combination with survey research. The data results are to be used to establish correlation between childhood risk factors for adult propensity for crime and mental stability.

VALERIE KESSLER**The Cognition of Expert Dancers***Mentor:* Dr. Valerie Sims (Psychology)

This project is an ongoing investigation into the cognition of dancers. The objective is to determine if dancers have a different way of processing information, and how this way of thinking affects their other cognitive abilities.

JAMES KOZACHUK**An Investigation of the Effect of the Discrete Fitts' Pointing Task on Physiological Stress***Mentor:* Dr. Daniel McConnell (Psychology)

Fitts' law is a tool to quantitatively model human movement during a task, predict performance, and evaluate various input devices. As Fitts' tasks have many uses in psychological research, it is important to understand the effects it has on participants. The present study sets out to quantify task stress response.

CHRISTINA KURSEWICZ**Palliative Care Education in American Medical Schools***Mentor:* Dr. Elzbieta Sikorska-Simmons (Sociology)

I assessed the curricular interventions designed by various American medical schools to improve undergraduate palliative care education. Ideally this will publicize the importance of early palliative care education and impact medical school education curricula to ultimately improve the quality of life for patients with chronic diseases.

GRAYSON LANZA**A Contemporary Analysis and Comparison of the Kurdish Nationalist Movement: A Case Study on Syria***Mentor:* Dr. Houman Sadri (Political Science)

The main objective of this research paper is to analyze and compare the contemporary Kurdish nationalist movement in Syria compared to other Kurdish-dominated regions in the Middle East. Difference in ideology, allies, and ultimate end goals for the national movement are what will be examined and compared.

NICOLETTE LEIBOWITZ**The Relationship Between Color and Trust When Building a Trustworthy Robot***Mentor:* Dr. Peter Hancock (Psychology)

We intend to evaluate attitudes about robots and investigate how robot appearance, particularly color, affects trust. Specifically, we will examine similarities in color choice when participants are given the task of "building a trustworthy robot" using simulated robot software.

ALEXANDRA LOCCISANO**Getting Students Engaged in Honor Societies: What Factors Influence Level of Involvement***Mentor:* Dr. Stephanie Vie (Writing and Rhetoric)

This project will analyze how collegiate honor societies encourage students to become involved and engaged. To analyze this, I will use secondary research and interviews with student leaders in honor societies to determine factors like requirements, marketing strategies, activities, and the number of students actively involved in the organization.

JENNIFER MCDONNELL

Correlations Between Sexual Imagery and Sexual Cognitions

Mentor: Dr. Chrysalis Wright (Psychology)

Correlational analysis between the sexual imagery displayed within the music video medium, and the sexual cognitions of viewers. The heterosexual script found across the majority of music videos is explored while also referencing theories of social learning, sexual objectification, and cognitive dissonance, among others.

EMMA MCGEATH

Driving Adjacent to an Autonomous Vehicle: A Survey of Trust

Mentor: Dr. Peter Hancock (Psychology)

This poster focuses on the primary research that will lead to a study on trust in driving alongside autonomous vehicles.

MELISSA MERZ

The Effect of Decision Domain on Economic Decision-Making

Undergraduate Co-Author: James Ross

Mentor: Dr. Nichole Lighthall (Psychology)

The main objective of this project is to better understand how people make economic decisions. Specifically, the project examined effects of decision domain (gains versus losses) on choice selection and probability estimations to improve our understanding of how value judgments evolve over time.

FERNANDO MONTALVO

Assessing Fitness Band Icon Usability

Mentor: Dr. Janan Smither (Psychology)

Wearable fitness devices have quickly gained popularity in recent years while research on their usability has remained scant. The present study explored user interpretation and preference of common fitness device display icons to gauge barriers to device adoptability, ease of use, and user understanding of presented data.

LANDON MORLEY

Virtually Me: Personality Influences on Online Dating App Selection

Undergraduate Co-Author: Emily Chesley

Mentor: Dr. Grace White (Psychology)

This study will explore personality predictors for specific use of certain online dating apps. Specifically, this study will explore whether certain personality characteristics predict the use of dating apps geared toward casual hookups or dating apps geared toward monogamous relationships.

YETZENIA NEGRON

Victimization Experiences and Its Influence on Job Choice

Mentor: Dr. Amy Reckdenwald (Sociology)

The purpose of this project is to examine whether prior victimization experiences, particularly related to intimate partner violence, influence an individual's job choice. The study will analyze if individuals have chosen jobs that assist others in their everyday life and highlight areas of opportunity to enhance services and resources for career development.

SOFIA NEIRA

Perceptual Grouping in Visual Working Memory

Mentor: Dr. Mark Neider (Psychology)

Gestalt principles promote the perception of an object without having physical connections and increase visual working memory capacity. Utilizing a change detection paradigm, we evaluated grouping by closure and proximity to determine whether closure produces similar or greater visual working memory capacity benefits compared to other Gestalt principles.

TAMAR NIR

Hebrew and Computer-Mediated Communication: The Effects of a Linguistic Manipulation on Perception, Identity, and Preservation

Mentor: Dr. Valerie Sims (Psychology)

This project aimed to explore participants' perception of a specific computer-mediated linguistic manipulation of Hebrew. This manipulation, dubbed "Fakatsa," is characterized by overt, feminine deviations to standard grammatical Hebrew. Participants were asked to rate snippets of text on multiple levels with regard to the grammatical structure and perceived writer.

MEI OSUKA

The Impact of Price Deviation on the Perceived Quality, Value, and Revisit Intention in Hotels

Mentor: Dr. Ji-Eun Lee (Hospitality Services)

The purpose of this study is to explore the impact of price deviation on the perceived quality, value, and revisit intention in hotels. More specifically, this study investigates the effect of three different directions of price deviation (positive, negative, and no deviation) on lodging consumers' judgments of quality, value, and revisit intention.

ZOE PHILIPSON

Parent-Child Cognition in the Performing Arts: How Perceived Parental Control Affects Parent-Child Relations in Youth Theater

Mentor: Dr. Valerie Sims (Psychology)

This research project examines the effects of perceived parental control on children's enjoyment and participation in youth theater. Data collected from surveys taken by children in theater and their parents was analyzed using a regression analysis to examine the relationships between various factors, including perceived control factors and satisfaction factors.

ANDRE PIEREND

Role of Socialization Outlets and Environmental Factors on Virtual Sports Team Performance

Undergraduate Co-Author: James Kozachuk

Mentor: Dr. Doan Modianos (Psychology)

Team-based video games are becoming popular, especially for students. The performance of high school students playing in gaming competition was used to determine what factors can affect performance. The importance of allowing students the opportunity to have an after-school social outlet around their competition shows an increase in performance, among other benefits.

SOCIAL SCIENCES II CONTINUED

LAUREN REYNOLDS**Are Ag-Gag Laws Constitutional?***Mentor:* Dr. Peter Jacques (Political Science)

The objective of this research is to investigate and conclude the legality of "ag-gag" laws under the individual rights provided by the U.S. Constitution's Bill of Rights through analyzing legal cases from the eight states that have enacted ag-gag laws.

VANESSA RINKER**Criminal vs. Mentally Ill: A War on Drugs or a War on Society?***Mentor:* Dr. Amy Donley (Sociology)

This study examines the public's views toward those who abuse substances. Specifically I assessed whether respondents believe that substance abusers should be viewed as criminals and should therefore face incarceration or if respondents viewed them as having a mental health issue that necessitates treatment in mental health or rehabilitation facilities.

KARLENE RIVERA**What Would You Call Family?***Mentor:* Dr. Racine Jacques (Sociology)

This research explores whether a person's own family influences their perceptions or definitions of family. The purposes of the research are to investigate (1) whether the definition of family will be reflective of one's own family and (2) if one's own family affects how family is defined.

KYLE ROMANO**Public Discourse: Frames in Everglades Restoration***Mentor:* Dr. Peter Jacques (Political Science)

For this project, I analyzed letters to the editor that discussed Everglades restoration in three major Florida newspapers. After incorporating new data into the sample, I uncovered important themes within the public discourse involving the Comprehensive Everglades Restoration Plan. These themes have important consequences for the restoration effort in general.

DAYANARA ROSADO**Identity Development and Motherhood***Mentor:* Dr. Steven Berman (Psychology)

Teen pregnancy and caring for a baby can cause rupture and loss to one's sense of identity. Support for parenting may ameliorate some of these negative effects. The purpose of the present study is to investigate the links between identity, adjustment, and parenting support among adolescent mothers.

SOCIAL SCIENCES III

KELLY ROSCH**The Effects of Metacognitive Prompting on Music Learning***Mentor:* Dr. Valerie Sims (Psychology)

This project studied the effects of various types of metacognitive prompting on novice musicians' ability to retain musical knowledge and transfer it to new performance situations.

ANDIA RUIZ PAYNE NARCIS**Addicted to Love: A Correlational Study of Personality, Commitment, and Attachment in Intimate Relationships***Mentor:* Dr. Grace White (Psychology)

The purpose of this research is to investigate how self-esteem, attachment style, personality traits, and commitment levels affect satisfaction within romantic relationships.

BROOKE RUSOFF**Exploring Attachment Behaviors in Urban Mothers and Their Infants***Mentor:* Dr. Anne Culp (Teaching, Learning, and Leadership)

This study seeks to explore attachment behaviors in urban mothers and their infants who are enrolled in a nine-week parent education program. Using observational measures, the researcher anticipates growth in attachment behaviors as well as an increase in the frequency of positive interactions over the course of the program.

NICOLE RYAN**American Agribusiness and Biotechnology: A New Era of Industry Farming***Mentor:* Dr. Houtan Sadri (Political Science)

This research focuses on the evolution of U.S. agriculture and the regulation of genetically modified organisms. Under the direction of the Food and Drug Administration many GM plant species have been approved without extensive testing. The difference in adopted policy between the U.S. and EU serves to raise further questions.

JASMINE SAMUEL**Authoritarianism and Collectivism: Antecedents and Consequences***Mentor:* Dr. Doan Modianos (Psychology)

The current research examines an individual's morality and how it influences sociopolitical attitudes, sociopolitical ideologies, and self-view.

AMAIRINI SANCHEZ**Social Media and Self-Presentation***Mentor:* Dr. Amy Reckdenwald (Sociology)

The purpose of this research is to compare the usage of social media with the presentation of one's self. I hope to be able to explain if the level of online interaction is related to the way one chooses to create our online persona.

ANGEL SANCHEZ**Can Independent Redistricting Commissions Lead Us Out of the Political Thicket?***Undergraduate Co-Author:* Tyler Yeargain*Mentor:* Dr. Barry Edwards (Political Science)

In response to partisan gerrymandering, legislative gridlock, and court interventions, states have responded with the creation of independent redistricting commissions (IRCs) to draw legislative lines in place of legislatures. The U.S. Supreme Court has recently declared IRCs constitutional. This research seeks to evaluate whether IRCs achieve their intended goals.

JOSE SANCHEZ**Hinterland Relations: An Analysis of Values Governing the Salton Sea Restoration***Mentor:* Dr. Peter Jacques (Political Science)

The Salton Sea faces detrimental anthropogenic, abiotic, and biotic disturbances. I am investigating the values that govern Salton Sea restoration.

BRYANT SANTANA

A Descriptive Analysis of DUI Arrests Across Florida Counties

Mentor: Dr. Gail Humiston (Criminal Justice)

Theories determine how DUIs vary in Florida's wide range of offenders' age; county populations were analyzed to find out if universities and tourist destinations had an overall effect on the DUI rates and which age group impacted those rates the most.

ADRIANA SANTIAGO ACEVEDO

Understanding How Cultural Gender Beliefs Affect Young Women's Leadership Identity Development

Undergraduate Co-Author: Anjelica Doriety

Mentor: Dr. Amanda Anthony (Sociology)

This research examines influences of the Young Women's Leadership Program (YWLP) on young women's perceptions of leadership, personal ideals and aspirations, and self-confidence. YWLP is a research-based mentoring program with the mission of promoting leadership and girls' empowerment. This project utilizes mixed methods to explore these dimensions of identity and leadership development.

CAITLIN SAWYER

Overcoming a Handicap: A Case of Foot Amputation in Pre-Hispanic Peru

Mentor: Dr. Jennifer Toyne (Anthropology)

To identify the societal value handicapped individuals held in pre-Hispanic Peru, the case of an amputated individual from the Peruvian coastal site of Túcume from the Huaca Abejas monument will be assessed in regard to potential medical and social assistance observed in the bioarchaeological evidence.

NICOLAS SAWYER

White Dudes Making Films About White Dudes: Using Computational Linguistics to Quantify the Agency of Characters in Contemporary American Films

Mentor: Dr. Peter Jacques (Political Science)

The objective of this study is to provide a content analysis tool that uses computational linguistics to quantify the linguistic agency of characters in screenplays. Linguistic agency is the tendency for certain characters to act on other entities, be acted on by other entities, or be described in certain ways.

SAMANTHA SHEPARD

Effects of Sexist Humor on Women

Undergraduate Co-Authors: Alyssa Finner, James Kozachuk, Jacob Walters

Mentor: Dr. Doan Modianos (Psychology)

Humor is interpreted less critically than nonhumorous communication. Research shows that exposure to sexist jokes (versus nonsexist) causes men high in hostile sexism to discriminate against women. Prompted by the lack of research on female populations, this study seeks to understand how sexist humor affects women.

EMILY SIMPSON

Family and Peer Influence on the Frequency of Swearing

Undergraduate Co-Author: Joshua Duarte

Mentor: Dr. Chrysalis Wright (Psychology)

This project aimed to research the various sources of swearing. In an effort to educate the public, provide information regarding healthy child development, and prevent workplace disharmony, we determined a person's mother is the most influential regarding his/her swearing habits and frequency of usage.

CASSANDRA SMITH

Sexual Orientation and Identity Formation

Mentor: Dr. Steven Berman (Psychology)

The purpose of this study is to explore the complex relationships among prejudice, adjustment, and identity development. It was hypothesized that homophobia would be negatively related to psychological adjustment but that this relationship would be especially strong among those with less developed identity formation.

DEVIN SMITH

The Relationship Between Political Attitudes and Self-Esteem

Undergraduate Co-Author: Enrique Leon

Mentor: Mr. Jason Chesnut (Psychology)

The purpose of this study is to examine the relationship between self-esteem and political attitudes. A small but growing body of research exists on the relationships between particular personality traits and political attitudes, although little is known about the self-esteem-political attitude relationship. This study is intended to address this gap.

SONALI TEWATIA

Forget Me Not

Mentor: Dr. Grace White (Psychology)

The purpose of this study is to examine the role of personality and memory recall bias in romantic relationship satisfaction. This study intends to determine what influence, if any, these factors have on how current romantic relationships are perceived and past romantic relationships are remembered.

MICHAEL TORRES

Mental Rotation with Martial Arts Experts

Mentor: Dr. Valerie Sims (Psychology)

This project compared the reaction times of experts and novices in martial arts during a mental rotation task. Previous research suggests expertise may play a role in mental rotation speed, especially when the stimuli resembles the area of expertise. This project investigated that hypothesis.

CAROL TYLER

Level of Satisfaction of Child Protective Services Based on Level of Interaction

Mentor: Dr. Amy Reckdenwald (Sociology)

The goal of this research is to find, if any, a correlation between the level of interaction with child protective services and an individual's level of satisfaction of child protective services.

ALEXANDER VENCI

Everything Is Awesome When You Create a Word

Mentor: Dr. Michelle Kelley (Teaching, Learning, and Leadership)

My research project is about investigating structural analysis in an elementary classroom. This project will focus on how structural analysis is used in an intermediate-level and a primary-level classroom.

SOCIAL SCIENCES III CONTINUED

SAMUELLE VOLTAIRE**The Usage of Young Adult Literature as a Vehicle to Teach Cultural Empathy**

Mentors: Dr. Tracy Wharton (Social Work), Dr. Reshawna Chapple (Social Work), Dr. Jeffrey Kaplan (Educational and Human Sciences)

This is an exploratory study aimed at assessing the current usage of the young adult (YA) literary genre as a learning tool or method to teach cultural empathy to social work students. Findings may be used to explore the different possibilities of incorporating YA literature in social work classrooms.

TAYLOR WAGNER**What About the Others?**

Mentor: Dr. Fernando Rivera (Sociology)

Revision of over 10 years of articles from the American Sociological Association to identify the persistence of the "other" category in sociological studies. Also to analyze and discuss the reasons given for utilizing the "other" label. Overall, the results will shed light on the understanding and measurement of race in sociology.

JENNY WALKER**An Examination of Individual Differences in the Context of Vigilance**

Mentor: Dr. Peter Hancock (Psychology)

This study examines the relationship between human performance, using a feedback versus no-feedback vigilance paradigm, and measures of individual differences. These include working memory capacity, propensity toward mind wandering, cognitive load, and need for cognition. The goal is to address the complexity of vigilance and build upon the direct-cost model.

JESSICA WALKER**Student Perception of Barriers to Study Abroad**

Mentors: Dr. Carlos Valdez (Marketing), Dr. Keith Folse (Modern Languages and Literatures), Dr. Carolyn Massiah (Marketing)

This project investigated students at the University of Central Florida and their perceptions of studying abroad. The primary objective was to determine which perceived barriers were most obstructive in their participation of the program in addition to researching where and how students constructed these beliefs.

DIAMOND WASHINGTON**Unique Challenges Faced by Homeless Single Fathers**

Mentor: Dr. Amy Donley (Sociology)

I am researching Orlando's male homeless population, specifically, homeless single fathers. I hope to gain qualitative information about their day-to-day lives and challenges. Homeless single fathers have remained underrepresented in the homeless population; as a result, there are few facilities or services tailored them.

BETHANY WEDLUND**Student Perceptions of Birth Mothers of Adopted Children**

Mentor: Dr. Shannon Carter (Sociology)

This research aims to describe public perceptions of women who place their children for adoption, known in this study as birth mothers, and to identify factors that may contribute to these perceptions. This study attempts to analyze the relationship between attitudes toward abortion versus attitudes toward birth mothers.

SAVANNAH WHEAT**"What I Wish I Knew:" Psychology Seniors' Advice to New Psychology Majors**

Undergraduate Co-Author: Randy Garland

Mentor: Dr. Karen Mottarella (Psychology)

This study examined over 950 letters in which psychology seniors provided their best advice to incoming psychology majors on how to make the most of their undergraduate experience. The letters were coded for common themes. These themes included both attitudes and behaviors that seniors believe promote success in the major.

GABRIELA WOLK**Is the Doctor In? The Effects of Emigration on the Health Care Systems in Poland and Romania**

Mentor: Dr. Anca Turcu (Political Science)

Since joining the European Union and the Schengen Agreement, Poland and Romania have experienced significant emigration that has subsequently affected their health care systems. Motivations for emigrating from these two countries and the effects emigration has had on patients and other doctors will be considered in this research project.

MEMONA ZAFAR**Ethnic Identity as a Buffer Against the Negative Effects of Perceived Discrimination**

Mentor: Dr. Steven Berman (Psychology)

The objective of this study is to investigate the incongruous relationships among ethnic identity, perceived discrimination, and psychological adjustment by testing the hypothesis that ethnic identity mediates the relationship between perceived discrimination and psychological adjustment.

DANIELA ZAPATA-OCAMPO**Describing the User Experience of Wearable Fitness Technology Through Online Product Reviews**

Undergraduate Co-Author: Baotran Ho

Mentor: Dr. Daniel McConnell (Psychology)

An analysis of online product reviews focusing on wearable technologies such as fitness-tracking devices was done. Usability, trust, motivation, and wearability were the four high-level themes used to determine the user's overall experience with select devices.

2015 UNDERGRADUATE RESEARCH JOURNAL PUBLICATIONS

The *University of Central Florida Undergraduate Research Journal (UCF URJ)* encourages, recognizes, and rewards the intellectual scholarship of undergraduate students by providing a peer-reviewed forum to share their research. The journal accepts student articles, essays, and adapted thesis projects from all majors. Students who publish their work gain valuable academic experience, preparing them for future success. Collaborative research is always welcomed.

The *UCF URJ* showcases articles of exemplary works from a wide range of student scholarship in all fields. The journal seeks outstanding research submitted by undergraduate students who have been involved in faculty-mentored research projects and activities related to scholarship.

The *UCF URJ* is on display at www.urj.ucf.edu.

COURTNEY A. ROY

"The Efficacy of Peer Presentations for English Language Learners"

Mentor: Dr. Dan Ezell

Published April 23, 2015

IRINA PIDBEREJNA

"The Impact of Culture on Students' Motivation to Acquire a Second Language"

Mentor: Dr. Alla Kourova

Published April 30, 2015

VICTORIA LEAGUE

"'On That Day We Will Be Free:' Reflecting Women's Real Experiences in Joanna Russ's *The Female Man* and Margaret Atwood's *The Handmaid's Tale*"

Mentor: Ms. Farida Cato

Published June 24, 2015

GRANT W. MOHI

"Positive Outcomes of Divorce: A Multi-Method Study on the Effects of Parental Divorce on Children"

Mentor: Dr. Elizabeth Grauerholz

Published Sept. 22, 2015

ASHLEY TORRES

"Teaching 'Like a Girl:' Student Reflection of the Benefits and Challenges of Feminist Pedagogy"

Mentor: Dr. Cecilia Rodríguez Milanés

Published Nov. 12, 2015

TAYLER TRUHAN

"Parentification in Deployed and Non-Deployed Military Families: A Preliminary Assessment"

Mentor: Dr. Sandra Neer

Published Dec. 15, 2015

UNIVERSITY OF CENTRAL FLORIDA LIBRARIES

**Annual Award for Excellence in Undergraduate Research Publishing in the
*University of Central Florida Undergraduate Research Journal***

The University of Central Florida Libraries is pleased to announce **Tayler Truhan**, *Parentification in Deployed and Non-Deployed Military Families: A Preliminary Assessment*, has won the 2016 Award for Excellence in Undergraduate Research Publishing.

Congratulations to **Tayler Truhan** and her mentor, **Dr. Sandra Neer**!

DISTINGUISHED UNDERGRADUATE RESEARCHER AWARD (DURA)

In January 2010, the Student Undergraduate Research Council, in collaboration with the Office of Undergraduate Research, developed DURA, formerly known as the Undergraduate Researcher of the Month program. Each month a new student is honored with the award. The following students were recognized in 2015.

JANUARY

ANALISE MCGREAL

Trauma Management Therapy (TMT) Program

Mentors: Dr. Deborah Beidel and Dr. Sandra Neer (Psychology)

FEBRUARY

IMAD HANHAN

Assessment of Instructional Presentation for Emergency Evacuation

Mentor: Dr. Seetha Raghavan (Mechanical and Aerospace Engineering)

MARCH

JOANNA BORISSOVA

Analyzing the Factors that Influence Dental Anxiety

Mentor: Dr. Fernando Rivera (Sociology)

APRIL

JULIES DESLAURIERS

Minimum Dosage of Acetic Acid Needed to Eradicate Aquarium *Chaetomorpha*

Mentor: Dr. Linda Walters (Biology)

MAY

MANUEL MORALES

Angular Dependence of the Emission from Pie-Shaped Wedge Triangular Mesas

Mentor: Dr. Richard Klemm (Physics)

JUNE

JARED MUHA

An Empire on the Brink of Destruction: Seleucids After Antiochus III

Mentor: Dr. Robert Cassanello (History)

JULY

ANDREW DAKKAK

Compound Screen for Identifying Novel *Clostridium difficile* Therapeutics

Mentor: Dr. William Self (Biomedical Sciences)

AUGUST

BURDLEY COLAS

Designing a High-Power Wavelength Division Multiplexer

Mentor: Dr. Axel Schülzgen (Optics)

SEPTEMBER

BROOKE SARLEY

Analyzing Microstructure of Additively Manufactured Inconel 718

Mentor: Dr. Seetha Raghavan (Mechanical and Aerospace Engineering)

OCTOBER

PREETI KUMRAH

Antimicrobial Treatment of *Staphylococcus aureus* Biofilm Associated Skin Infections

Mentor: Dr. Swadeshmukul Santra (Chemistry)

NOVEMBER

GRACE AVECILLA

Temperature, Cuticular Melanization, and Immune Function in *Diaphorina citri*

Mentors: Dr. Kenneth Fedorka, Dr. Hojun Song (Biology)

DECEMBER

DANIEL ELBRECHT

Incorporation of Skin into In Vitro Drug-Screening Platforms

Mentor: Dr. James Hickman (Chemistry)

Applications are available at www.our.ucf.edu/accomplishments.

UCF UNDERGRADUATE RESEARCH COUNCIL

The Undergraduate Research Council promotes the involvement of undergraduates in the ongoing activities of the UCF research community and advises the Office of Undergraduate Research about policies and programs that pertain to undergraduate research at UCF.

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SURC was formed to promote awareness about undergraduate research for students at the University of Central Florida. Students actively engaged in research are selected each year to serve on this council. Through their support, the Office of Undergraduate Research has greater exposure on campus and gets continuous feedback on undergraduate research programs. Their help in promoting and running the Showcase of Undergraduate Research Excellence is greatly appreciated.

Thomas Carpino	Samantha Mensah	Marvi Qureshi
Emiangeliz Gonzalez-Luna	Catherine Ninah	Kelly Rosch
Linda Lavadia	Tamar Nir	Arjun Watane

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Who do you want to be when you graduate?

How will you acquire the knowledge and experiences you need to reach your goals?

.....
Studies have shown that **Integrative Learning**—developing skills across multiple experiences and adapting these skills to new contexts—**can help students succeed** in their professional, civic, and even personal lives.

.....
In a recent national survey, 79% of employers said they wanted college students to engage in integrative learning to prepare for the workforce.*

*www.aacu.org/leap

How can you prepare for What's Next?

- **Seek advice:** talk to advisers, faculty, and mentors about the knowledge and skills you need to meet your goals.
- **Plan holistically:** college isn't just about accumulating course credits. It's about acquiring real-world capabilities. Seek experiences that will help you acquire the skills you need.
- **Make connections:** participate in internships, community outreach, student organizations, research projects, and other activities that complement your coursework.
- **Reflect on your experiences:** understanding what (and how) you learn will help you be your own best advocate and achieve your goals.

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undergrad.ucf.edu/whatsnext