# A Model for Quality Education to Support STEM Student Success

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# Outline

-About UCF

-A Model for STEM Student Success

-A Showcase of Examples

# INTRODUCTION

January 2019

# About UCF

- One of 12 state public universities in FL

- Located about 10 miles east of downtown Orlando

- 68,571 students[1]

- UCF has been among the top 100 universities in the world and 31st among public universities in the nation for patents for the past 5 years[2]

1. *Fall 2018*

1. *https://www.ucf.edu/news/ucf-among-top-100-universities-world-patents/*

# Supporting STEM Student Success



- Engineering and Computer Science 11872
- Sciences 10104
- Optics & Photonics 252
- Health Professions & Sciences 7035
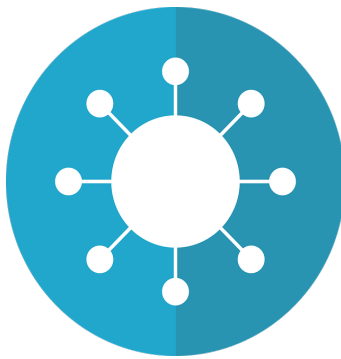- Other Colleges & Schools 39308

**TOP 10 MAJORS***

1. Psychology
2. Health Sciences
3. Biomedical Sciences
4. Nursing
5. Mechanical Engineering
6. Computer Science
7. Integrated Business
8. Biology
9. Finance
10. Hospitality Management

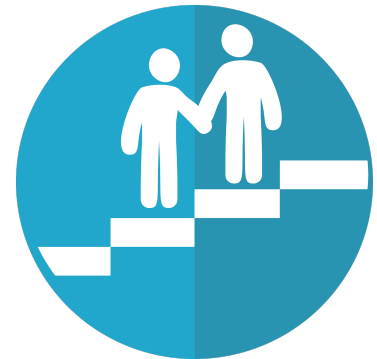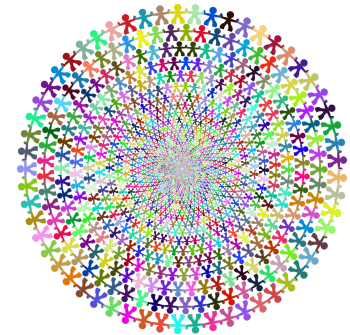*By Enrollment | Data provided by ikm.ucf.edu.

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# Our Model

Instruction

Collaborative
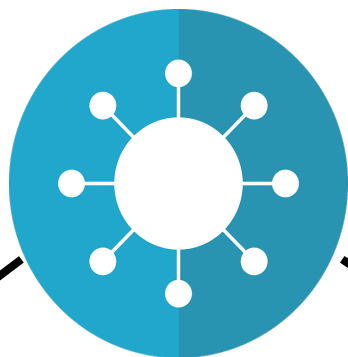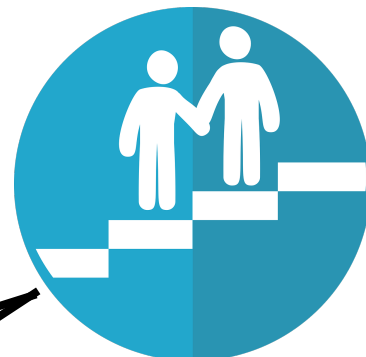
Outreach

Creative

Service

Cooperative

# Single Perspective
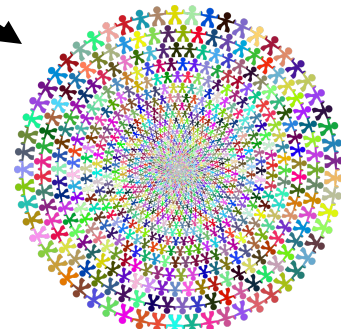
Instruction

Outreach

Service

Collaborative

Creative

Cooperative

# Multiple Perspective

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# Relevant Examples

# Supplemental Student Support

I. **Research Intensive Course Designation through the Office of Undergraduate Research**

- **Course Specific Research Guide Offerings**
- **LTI in LibApps via Canvas LMS to push Research Guides into every campus course shell**

II. **Textbook Affordability Initiatives**

- **Areas of focus:**

- locating electronic books as one-to-one replacements of existing course textbooks - with no cost to students

- hosting print copies of textbooks on Reserve

- identifying open educational resources and library-sourced information as alternatives to commercially produced textbooks

- tracking metrics associated with faculty adoptions
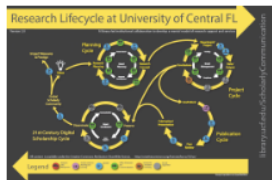
# Office of Scholarly Communication Initiatives

The Office of Scholarly Communication
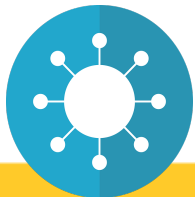
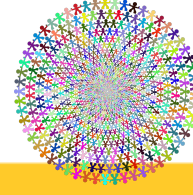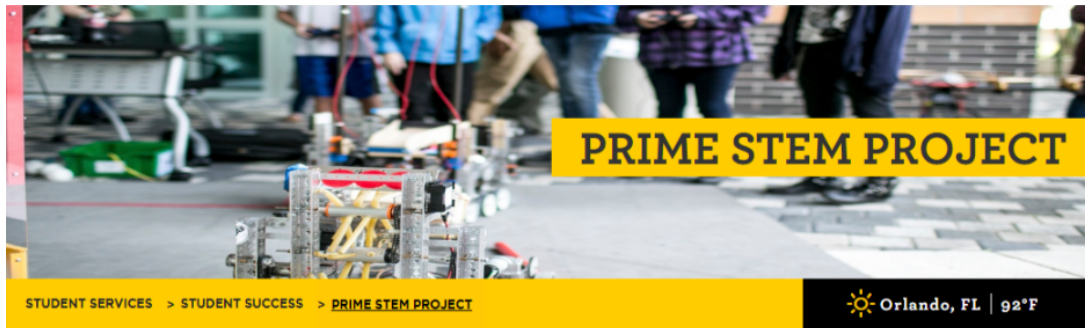Research          Open Access          Copyright

- **Hijacked Journals: How Open Access Journals Fall Into the Predatory Publishing Trap**

- **Future plans for programming like ACS on Campus and Publons training with Web of Science**

- **Shared publishing and presenting opportunities inside and outside of the library**

# International Graduate Student Welcome Orientation

# PRIME STEM



PRIME STEM PROJECT

SDES TRiO Center — Student Development and Enrollment Services

HOME    ABOUT    RESOURCES    FAQS    OUR HIGHLIGHT REEL    CONTACT    TOURS

STUDENT SERVICES > STUDENT SUCCESS > **PRIME STEM PROJECT**

Orlando, FL | 92°F

## PRIME STEM Project

Put simply, PRIME is an acronym for Purpose + Reach = Individuals Measured for Excellence. And the PRIME STEM Project addresses the academic and social needs of eligible UCF STEM students who are first-generation in college, have a documented disability or demonstrate financial need.
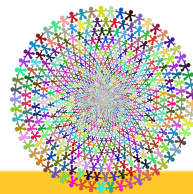
## PRIME STEM

## What is PRIME STEM?

### Purpose + Reach = Individuals Measured for Excellence (PRIME)

The PRIME STEM Project/Student Support Services is designed to increase the college retention and graduation rates of its participants and to assist students make the transition from one level of higher education to the next.  Short for, Purpose + Reach = Individuals Measured for Excellence (PRIME), PRIME STEM is tailored to meet the needs of 120 students who are pursuing and will be graduating in STEM related majors: Science, Technology, Engineering, Mathematics and Health Sciences.

PRIME STEM recruits students with SAT math scores of 490-590 or ACT scores of 18-23 and who are first generation in college students, who have a demonstrated financial need and/or those who have a documented disability.

# Honors in the Major Thesis Program

**Students work with subject librarians to get one-on-one research consultation support**

- **Promotion of a mentoring/advising relationship between librarian & student**

- **Builds student confidence in STEM related research skill set**

- **Provides important introduction to library research tools not provided in all STEM general courses**



BURNETT HONORS COLLEGE

| About | Admissions | Advising | Students | Research | Faculty | Parents | Alumni & Giving |

## Honors in the Major

Teaching in Honors
Interdisciplinary Seminars
Honors in the Major
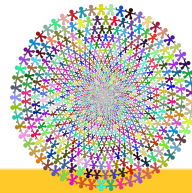
**USEFUL LINKS:**
Honors Advising
Honors Research
Prestigious Awards

**HONORS IN THE MAJOR**

The Honors in the Major (HIM) Program, is designed to encourage the best juniors and seniors to undertake original and independent work in their major field. Established in 1989, Honors in the Major is the oldest and most prestigious undergraduate research program at UCF. It is the only undergraduate research program on campus in which students are required to undertake original and innovative research as principal investigators. In this program, students research, write, defend and publish an original Honors thesis that serves as the capstone product of their undergraduate career. This thesis is published through the university library and is available to researchers worldwide through electronic databases.
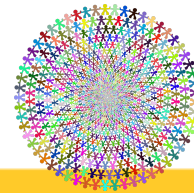
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# Summer Research Programs on Campus



The Office of Undergraduate Research programs to assist students in finding mentors & getting started in research at UCF tailoring to a variety of levels

- Summer Research Academy
- Summer Undergraduate Research Fellowship
- T-Learn @ UCF and F-Learn @ UCF Programs
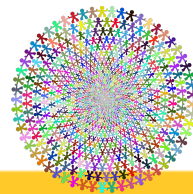
# NSF Research Experience for Undergraduates



NSF REU Site: Research Experiences on Internet of Things (IoT)

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NSF RESEARCH EXPERIENCES FOR UNDERGRADUATES

HYPER: Advanced Technologies for Hypersonic, Propulsive, Energetic and Reusable Platforms

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# Quality Enhancement Project Grant

The Office of the Quality Enhancement Plan (QEP) funds faculty and staff projects that address the QEP's theme, *What's Next: Integrative Learning for Professional and Civic Preparation*, and that seek to improve undergraduate student learning at UCF.

Libraries Bridging the Gap between Innovation and Entrepreneurship

**ENTREPRENEURSHIP WORKSHOPS**

UCF | John C. Hitt Library
UNIVERSITY OF CENTRAL FLORIDA

https://guides.ucf.edu/entrepreneurs

# Professional Development Research Award Funding

The purpose of this research award is to encourage and provide funding for meaningful faculty development through the pursuit of professional and scholarly activities. Priority is given to projects that explore research opportunities or the acquisition of new skills that will benefit the faculty member and the Libraries.

## A Survey of STEM Librarians in Academic and Joint-Use Libraries in Florida

Thanks for your attention!

Any questions?

UCF Libraries
Visit us here:
library.ucf.edu

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