

# Women in CECS

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# Increasing Access and Graduation for Women

Women's  
Mentoring  
Network

Center for  
Inclusive  
Computing

Women's  
Programs  
Coordinator



# GEMS

(Girls EXCELLing in Math and Science)

- Peer-to-peer women's mentoring program designed for EXCEL female freshmen
  - **96%** of mentees felt getting to know female role models motivated them in their major
  - **97%** believed GEMS provided opportunities for unique academic and social experiences
- In program's first year, improved male/female STEM retention gap by **more than 6%** and continues to close



# Retention and Graduation Data

Retention gap differential and graduation total for EXCEL males and females remaining in Engineering and Computer Science majors

|           | Retention Gap  | Total Graduation (%) |      |
|-----------|----------------|----------------------|------|
|           | First Year (%) | Female               | Male |
| Baseline  | 15%            | %                    | %    |
| 2010-2011 | 9              | 83                   | 63   |
| 2011-2012 | 1              | 58                   | 61   |
| 2012-2013 | +6             | 84                   | 65   |
| 2013-2014 | +2             | 68                   | 55   |
| 2014-2015 | 6              | 64                   | 60   |
| 2015-2016 | 2              | 60                   | 62   |
| 2016-2017 | +1             | 53*                  | 54*  |
| 2017-2018 | 6              | N/A                  | N/A  |
| 2018-2019 | +3             | N/A                  | N/A  |

Plusses (+) represent years where women have overcome a retention deficit.

\*reflects five-year graduation rate

# Women in Science & Engineering (WISE) Mentoring

- Professional-to-student mentoring program for EXCEL females created in fall 2011 to continue to address the gender retention gap
- Recruits sophomore to senior EXCEL female students to participate in 6-month mentoring program paired with female professional
- Of WISE participants completing the program (n=250), **90%** majored and completed a degree in engineering and computer science

# WISE Mentoring Partners

- In addition to mentoring, opportunities for students include internships, job shadowing and networking with women in their potential field.
- Since inception, program mentors have volunteered from **more than 50** companies and consulting firms:

AdventHealth  
Blue Origin  
Cole Engineering  
City of Casselberry  
City of Winter Park  
Collins Aerospace  
Core and Main  
Cubic Defense Systems  
Design Interactive  
Dignitas Technologies  
Disney  
Duke Energy  
L3Harris

Leidos  
Healthfirst Inc.  
Horizon Civil  
Irradiance Glass  
JC Ventures  
Johnson & Johnson  
Kismett Technologies  
Lockheed Martin  
Lane Construction  
Medical Research Group  
Metters  
Millennium Engineering and Integration Company  
Mitre

NASA  
National Center for Forensic Science  
Northrup Grumman  
NAWCTSD  
Orlando Utilities Commission  
PEOSTRI  
Raytheon  
SAIC  
Siemens  
SimIS  
Smart Electric Power Alliance  
Wharton-Smith Inc.

# From Our Students

The WISE mentoring program **changed my life**...Because of my mentor's guidance, I learned how to effectively talk to recruiters at job fairs and how to have a successful interview. I applied for 3 different internships and received offers from all 3!

As I embark into the next phase of my life as a graduate, I have to thank my WISE mentors for **pushing me and developing me into the person I am today**. Without the guidance and opportunities they provided for me, my horizons would be a lot narrower.

Being a part of this program was an absolutely amazing experience. I learned a lot about myself and **I was able to gain more knowledge and confidence** that will benefit me in my future career.

# From Our Mentors

The WISE Mentoring program with UCF has been fantastic. What a **fun, structured approach to ensuring both mentor and mentee goals are met!** The pairing process was customized for each mentee and the full profiles were worth the effort! I couldn't have asked for a better mentee and I'm beyond proud of all she was able to accomplish so quickly in our time together.

WISE is very **fulfilling for both the mentor and mentee** as we both promote women in STEM. Working with a mentee **helps me appreciate my job and the career path taken.** Sharing the career journey makes me appreciate the highs and the lows and share the lessons learned.

**What a refreshing program!** Going in I had no idea it would be so rewarding on so many levels. Great program and wonderful execution.



# Scaling Our Impact

Expand the impact of mentoring programs for women and underrepresented students

|           | Female STEM First-Year Retention (%) |            | Female STEM Graduation (%) |            |
|-----------|--------------------------------------|------------|----------------------------|------------|
|           | EXCEL                                | Comparison | EXCEL                      | Comparison |
| 2011-2012 | 77.3                                 | 58.7       | 49.3                       | 35.2       |
| 2012-2013 | 78.9                                 | 59.5       | 61.9                       | 37.4       |
| 2013-2014 | 70.5                                 | 57.6       | 52.3                       | 34.9       |
| 2014-2015 | 73.3                                 | 59.6       | 51.1                       | 37.9       |
| 2015-2016 | 79.1                                 | 67.2       | 50                         | 45.4       |
| 2016-2017 | 81.7                                 | 67.4       | 43.9                       | 37.1       |
| 2017-2018 | 71                                   | 74         | 49.4*                      | 55.9*      |
| 2018-2019 | 81.7                                 | 75.1       | 61.3*                      | 51.3*      |
| 2019-2020 | 83                                   | 76         | 61*                        | 58.2*      |

**Female 1<sup>st</sup> Year Retention and 6-Year Graduation Comparison of EXCEL and matched STEM Control Group**

# Center for Inclusive Computing

## Curriculum

- COP 2500 redesign
- Consistency in entry sequence
- CS+X minor

## Women's Coordinator

- GLAMPing
- Multi-year plan for advancing the mission
- Leverage for continued support

# The Future



SIP FUNDING - EXCEL TRANSFERS



WOMEN'S COORDINATOR 2 YRS SUPPORT  
POTENTIAL ADDITIONAL CIC FUNDING

# Discussion

