Collection and Visualization of STEM CSUN Alumnae Data for Positive Change

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Bonita J. Campbell Endowment for Women in Science and Engineering (WISE)

• *Inspire the future, nurture the present, celebrate the past*”
  • https://library.csun.edu/WISE

• In 2009, Professor Emerita Bonita J. Campbell of the CSUN Department of Manufacturing Systems Engineering and Management established an endowment
  • To "facilitate both the participation of women in science and engineering, particularly those fields in which they are insufficiently represented, and the development and preservation of knowledge about women in the science and engineering disciplines."

• The Library gratefully acknowledges the Bonita Campbell Endowment's critical support in
  • Developing the Library's collections in Science and Engineering (Browse the Bonita J. Campbell Endowment Collection)
  • Hosting events that celebrate and promote women's achievements in science and engineering fields
    • Including Speed Mentoring, Pi Day STEM & Career Networking, Speaker Dr. Bonnie Dunbar
  • Periodic research grant extended for CSUN faculty
What Can We Learn from our Alumnae?

• Look to CSUN STEM alumnae in their academic and professional careers for advice and comments
• Survey questions address valuable courses, student club participation, participation in research and internships
• Also, look at data in aggregate, such as geography
  ➢ Share information with current and future students
  ➢ Use conclusions of the data to champion new approaches or support existing approaches at CSUN to increase the number of and support women in STEM at CSUN.
Survey Questions

1. At CSUN, was there a course, a program, or a person you would like to highlight, as instrumental in your success?

2. What would you change at CSUN to improve the participation of women in STEM? What do you wish was different at CSUN while you were in attendance?

3. Did you have any mentors during your time at CSUN? If yes, how did you find them and how did they impact you?

4. Did you do research in a research lab and/or with a faculty member at CSUN? If yes, how did that impact your success?

5. Did an internship or other work opportunity play a significant role during your time at CSUN and/or in finding a position following graduation? What was the opportunity, how did you find it, and what impact did it have?

6. In which student groups, if any, did you participate? How much time did you commit to them? How did the student groups impact your academic and/or professional success?

7. Did family, children, geography, and/or employment affect your opportunities during your time at CSUN and your professional career immediately following graduation?

8. What was your major(s) and when did you get your degree?

9. What professional position do you have now? Feel free to include a link to your resume or any other information regarding your current position.

10. Would you be willing to participate in a follow-up phone interview? If yes, please give you contact information.

11. Anything else you would like to add?
A course, a program, or a person you would like to highlight, as instrumental in your success?

60% of responses cited one or more specific professors
18% of responses cited a class or classes
What would you change ...?

More female faculty (8, 20%), seminars and/or mentorship (7), student clubs (3), research opportunities (2), internships (2)

“Women only workshops. For example, as a mechanical engineering student, I would've benefited more from learning the machine shop but I was too shy to try to learn around all males who were already comfortable with the equipment.”

“[C]hanging the class timings from Night to Day, most of my MS classes were till night 9:30 so it was a little scary to walk back alone at night.”

“I would highlight all the careers a woman can choose from with a STEM career. I was lucky enough to know what profession I wanted to be in but it was a profession that no one really talked about.”

“A workshop or a group to discuss obstacles and discrimination that may be encountered as a woman in STEM”

“I wish women were encouraged more to be in STEM. I wish there were workshops or conferences or meetings where women in STEM could encourage each other”
Did you do research ...? If yes, how did that impact your success?

“Huge Impact”

“Yes, it was crucial for my graduate school admission.”

“Yes. It allowed me to work on multiple projects that broadened my skill set beyond what school courses could offer. It also helped build work experience, programming, and problem solving skills.”

“Yes! It was a great experience. I would highly recommend it to anyone considering or unsure of what they want to do once they graduate. It taught me a lot, and I got to connect with graduate students who greatly contributed to my success and experience at CSUN”

“And it impacted my success to teach me to be confident and proactive, not just theoretical...but actually DO what I knew to be true - to put into practice what I was learning. And my research in lab with my faculty member taught me to use my voice.”

“Yes and it made me change my entire career plan. I’m now a researcher in biotech.”

“Yes I did my thesis ... on medical device integration with mobile technology and now soon I will be working at Medtronic for same type of project.”

20 out of 46 said Yes!
Did an \textbf{internship} or other work opportunity play a significant role ...? ...how did you find it...?

“I had an honors co-op position ... I was lucky to have a mentor there who was willing to let me explore. ...That experience gave me confidence in the workplace and looked good on my resume, even though it didn’t directly land me a job after graduation.”

“Yes! I ... did an internship with them, and now serve on the board of directors ... It provided immense hands on experience and networking opportunities and I was mentored by the founder; ... I directly give credit to this organization for giving me relevant experience that boosted me into my current career.”

25 out of 46 said Yes!

On-campus, off-campus, research based
In which **student groups**...did you participate?  
...How did the student groups impact ...success?

- AAPG, ACM, ASCE, ASME, BEER Club, Chem Club, Phil Delta Epsilon, IEEE, Formula SAE, Geology Club, Marine Biology Graduate Student Association, Microbiology Student Association, Tau Beta Pi
- SWE, WiS, WISE, SHPE
- CAUSA, Hermanas Unidas, Ski & Snowboarding Club, Sorority
- Student Advisory boards

“Networking, and being in a like minded group of goal oriented people was crucial for success in both education and career”

“The engineering club impacted me in a way where I was able to get my foot in the door when it came to interviews and networking. “

19 out of 46 said Yes!

6 more mentioned peer-groups through research programs AIMES2, BUILD PODER, MARC/RISE Summer Program, LSAMP, and Faculty Research Labs

1 mentioned Matlab workshop by student group