In 2012, only 18% (or 8,800) of the 49,000 Computer and Information Sciences undergraduate degree recipients were women (and only 13% at major research institutions, which typically have larger graduation pools). NCWIT Extension Services for Undergraduate Programs (ES-UP) addresses this crisis by providing change agents within institutions of higher education with evidence-based techniques and associated resources for recruiting and retaining women in computing degree programs. ES-UP focuses on helping build better systems, rather than simply helping women to deal with the existing ones.

ES-UP provides customized consultation to academic departments ("clients") to help them develop and move forward on their high-impact reform efforts. Each client is matched with an expert Extension Services Consultant (ESC) who uses NCWIT-developed resources to assist them in identifying opportunities, resources, allies, and assessment plans to track progress. ESCs typically work with a client for one to two years to provide on-going advice and resources.
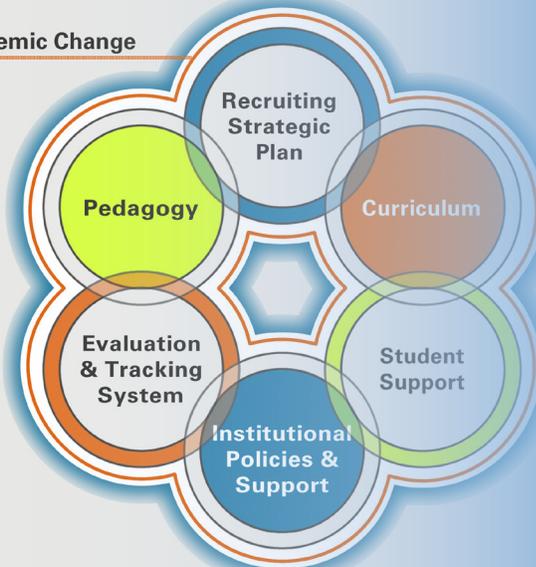
Systemic Change

Recruiting Strategic Plan

Pedagogy

Curriculum

Evaluation & Tracking System

Student Support

Institutional Policies & Support

"NCWIT Extension Services has been able to accomplish important change at participating organizations. ESCs provide a motivational mechanism which helps the client keep pushing forward as well as an informational mechanism to provide the client with the right information at the right time for the right problem."

~ Elizabeth Litzler, University of Washington Center for Workforce Development Director for Research and NCWIT External Evaluator

ES-UP has also developed a Tracking Tool — a web-based database and presentation tool — that allows clients to easily submit data about their programs (e.g. admissions, enrollment, and graduations by gender) and to compare their data to peer institutions. The Tracking Tool also lets users create a variety of graphs that can be easily shared with constituents and decision-makers. Currently, no similar data set exists that tracks this level of detail about the gender composition of undergraduate programs of computing.

ES-UP forms, launches, and tracks "client cohorts." Currently, two institutional cohorts are active: one funded by a grant from the National Science Foundation and the other funded by a gift from Google. For the NSF project, ES-UP is partnering with ENGAGE (Engaging Students in Engineering) to pair computing and engineering departments to work as cooperative teams. The Google-funded cohort focuses on high impact strategies for making quick change in large, high profile programs of Computer Science. These funds allow ES-UP to provide services without cost to our clients.

KEY RESULTS (ES-UP CLIENTS, COMBINED)

- Increased the percentage of women graduates by 65% over baseline between 2007 and 2013.
- Graduated 338 women with a BS in CS in 2007 and 557 in 2013. Overall, the increase in graduation rates from 2007-2013 was 3% (from 11% to 14%).
- Created new faculty and staff positions as well as minors, improved course requirements for majors, and developed new recruitment resources aimed at creating a more welcoming and thriving atmosphere for all underrepresented students.
- Used ES-UP Tracking Tool data to set and track concrete, realistic goals.
- Created and implemented strategic plans for recruiting and retaining women students.

WHY YOU SHOULD PARTICIPATE

- Work with a dedicated Extension Services Consultant (ESC) to help you set goals, develop your recruitment and retention plans, use NCWIT resources, apply for targeted funding, and evaluate your outcomes. ESCs help you get motivated, stay focused, and develop the skills and knowledge you need to keep moving forward.
- Connect with computing faculty across the country through annual in-person meetings.
- Learn how to customize and effectively deploy NCWIT's research-based approaches.
- Establish pipelines with local schools, universities, and community members.
- Become eligible for the NCWIT Extension Services Transformation Awards.

Find out more at www.ncwit.org/extensionservices.

"If [the ESC] and this service had not been here, the problems would still be here, and we would be working in isolation, and we wouldn't have made the progress we've made to date. Over the next few years, we'll see great results and all can be attributed back to this service and to [the ESC]."

~ ES Client

"NCWIT ES administered the Student Experience of the Major survey and provided analysis, which exposed several issues concerning student retention and support… Thanks so much for all your efforts. Quantitative information is powerful ammunition in influencing decision-making."

~ ES Client

ABOUT NCWIT

The National Center for Women & Information Technology is a non-profit community of more than 575 prominent corporations, academic institutions, government agencies, and non-profits working to increase women's participation in technology and computing. NCWIT helps organizations recruit, retain, and advance women from K-12 and higher education through industry and entrepreneurial careers by providing community, evidence, and action.