C+C counselors for computing

Between 2008-2018, there will be nearly 1.4 million computing-related job openings in the U.S. At the current rate at which computing degrees are being conferred, U.S. students will only fill about half of these openings.

Counselors for Computing

Counselors for Computing (C4C) is a four-year campaign that will equip more than a thousand school counselors with the information and resources they need to advise students about paths toward stable, rewarding, and flexible computing careers.

C4C will inform thousands of students — especially girls — about opportunities in computing and motivate them to pursue education and careers in these fields.

Counselors have an important role to play

C4C helps you increase students' interest and preparedness for computing jobs.

Significant factors shown to influence students' involvement in computing include **encouragement**, **recognition**, and **exposure to quality experiences**.

Through C4C you learn

- Up-to-date information about different kinds of computing jobs. Technology is driving innovation in every sector of the economy, resulting in jobs many people don't even know about.
- Little-known benefits of these jobs for students.
- Why having a larger and more diverse talent pool matters.
- What computing is – beyond what many think it is- and why underrepresented groups should be encouraged to participate.
- Key factors that influence students' participation in computing.
- Tips for advising students on how to prepare for these careers.

Through C4C you receive

- A **Talking Points Card** you can use to share important information about computing and careers with your students and their parents.
- **Community College, Military, and University Pathways Cards** for students. These cards align students' interests with clear actions that lead to stable, rewarding, and flexible careers.
- A **Slideshow Presentation** and **C4C Web Portal** with in-depth information for your students.
- Access to a **community of counselors** interested in this effort.

ncwit.org National Center for Women & Information Technology (NCWIT)
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Counselors for Computing QUICK FACTS

Technology Is Changing the World

Technology affects almost every aspect of modern life, and our students use technologies skillfully. Let's be sure they also participate in the invention of the next world-changing technologies.

Technical Jobs Not Limited to Tech Companies

Technical innovation is critical to things students care about. Imagine your students in:

- **Healthcare** – Developing software for a cochlear implant that helps people who are deaf to hear
- **Art** – Designing 3-D digital scanners that aid preservation of ancient artworks
- **Gaming** – Developing video games that rely more on brainpower than finger dexterity
- **Environmental Protection** – Creating global climate models that help to predict how Earth's climate is changing
- **Humanitarian Relief** – Inventing low-cost location devices to keep aid workers and separated families connected during disasters

Photo: WGBH-Dot Diva/New Image for Computing Initiative

Lots of Jobs, High Pay

Between 2008-2018, the U.S. Department of Labor estimates that there will be approximately 1.4 million computing-related job openings in the U.S. — an increase of 22% since 2008.

Given commensurate levels of education and time to graduation, computing occupations are more stable and pay better than other jobs.

Preparation	Sample Occupation	Projected growth by 2018	Median Annual Salary/ Hourly Wage (2008)
2-year Degree	Network Technician	14%	$43,450/$20.90
	Computer Support Specialist/ Help Desk	14%	$43,450/$20.90
	Biological Technician	18%	$38,397/$18.50
	Medical Record, Health Information Technician	20%	$30,610 / $14.70
4-year or Advanced Degree	Web Developer	13%	$73,250/$35.20
	Database Administrator	20%	$69,740/$33.50
	Business Management Analyst	24%	$82,090/$39.50
	Computer Software Engineer	32%	$85,430/$41.00

Source: U.S. Department of Labor, Occupational Outlook Handbook, 2010-2011.

Counselors for Computing QUICK FACTS

Qualified People Are Needed

Increasing girls' participation in computing could significantly reduce the gap between qualified workers and available jobs. Diversification of the workforce also leads to better innovation.

25 Percent of technical employees who are women[1]

9 Percent of IT management positions held by women[2]

56 Percent of Advanced Placement (AP) test-takers in 2010 that were female[3]

46 Percent of AP Calculus test-takers in 2010 that were female[4]

19 Percent of AP Computer Science test-takers in 2010 that were female[5]

57 Percent of 2009 undergraduate degree recipients who were women[6]

18 Percent of 2009 Computer and Information Sciences undergraduate degree recipients who were women[7]

Sources:

1. U.S. Department of Labor Statistics, Current Population Survey, 2009.
2. 2008-09 Dice Tech Salary Survey.
3. College Board AP Program Summary Report, 2010 (Calculus AB & BC, Computer Science A).
4. See #3.
5. See #3.
6. National Center of Educational Statistics (NCES), 2009 (CIP 11); 2008–2009 CRA Taulbee survey (Computer Science).
7. See #6.

Recognition, Encouragement, and Access to Quality Experiences Make a Difference in Students' Participation

Take action and help students get involved.

- **Recognition** – Nominate a girl for the NCWIT Award for Aspirations in Computing.
- **Encouragement** – Help students distinguish between computer applications and computer science courses, and encourage them to take computer science!
- **Access** – Advocate for computer science courses in your district; suggest students get involved in camps, courses, and clubs.

In 2010, the NCWIT Award for Aspirations in Computing was granted to more than 400 high school girls. By 2012, over 1,000 girls will be recognized. Help grow the award. Nominate a girl.

Get Involved!

- **Attend a workshop.** Enjoy an engaging session; leave with new ideas and useful materials for you and your students. Visit www.ncwit.org/c4c for a calendar of events.
- **Share knowledge.** Join a cadre of peer trainers and provide professional development to your colleagues at the local level. Send email to c4c@ncwit.org.
- **Bring *Counselors for Computing* to your area.** Contact jkrauss@ncwit.org.

SPREAD THE WORD: JOIN COUNSELORS FOR COMPUTING
www.ncwit.org/c4c

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national center for women & INFORMATION TECHNOLOGY

K – 12 NCWIT ALLIANCE

MERCK *Be well*

NCWIT Strategic Partners — the National Science Foundation, Microsoft, and Bank of America; and NCWIT Investment Partners — Avaya, Pfizer, and Merck.