

# So you want to diversify your 4-year Information Technology program?

*Community college students represent an untapped resource of talented students with interests in IT!*



## Make the case for recruiting community college students

Use the facts to encourage Computer Science and Information Technology (CS/IT) faculty and administration at your four-year institution to recruit community college transfer students into their programs.

## Recruit through community college advisors

and community college faculty in fields such as business, criminal justice, and health. Persuade advisors to promote CS/IT career fields and provide them with recruitment materials for their community college students



## Remember: Transfer is gold

Construct transfer pathways that are efficient for students and easily understood by both students and advisors.

## Get 'em, Keep 'em, and Graduate 'em

Understand the needs particular to community college students and accommodate them whenever possible to help with retention and completion rates in your CS/IT program.





# Make the case for recruiting community college students

Use the facts to encourage CS/IT faculty and administration at your four-year institution to recruit community college transfer students into their CS/IT programs.

**1.** CS/IT degree programs at four-year institutions have shown a drop in enrollment. There are especially low numbers of women and underrepresented minorities enrolled in four-year CS/IT programs. But relatively high numbers of women and underrepresented minorities attend community colleges.

“Tapping into this pool of students could alleviate declining numbers studying CS/IT at four-year institutions, as well as boost the numbers of women and underrepresented minorities in CS/IT fields.”

Jessup, E., Sumner, T., & Barker, L. (2005). Report from the trenches: Bringing more women to the study of computer science. Boulder, CO: Alliance for Technology, Learning, and Society National Center for Women in Information Technology By The Numbers

**3.** A misconception regarding expanding the community of CS/IT students and practitioners suggests that accommodating a new type of CS/IT student will cause a “dumbing down” of curricula, which would be detrimental to current, more traditional CS/IT students.

“In fact, research suggests that interaction with diverse students amplifies learning outcomes such as group problem solving, creativity, perspective-taking skills, and increases breadth of knowledge for ALL students in higher education, regardless of a student's race, GPA, SAT, background, or gender.:

Chang, M. J., Witt, D., Jones, J., & Hakuta, K. (2003). Compelling Interests: Examining the evidence on racial dynamics in higher education. Palo Alto, CA: Stanford Press.  
Gurin, P., Dey, E., Hurtado, S., & Gurin, G. (2002). Diversity and higher education: Theory and impact on educational outcomes. Harvard Educational Review, 72(3), 1-32..

**2.** A persistent perception exists in academia that community college students are less capable students who do not have the skills to succeed in four-year CS/IT programs.

“Once community college students successfully transfer to a four-year institution, they graduate at nearly the same rate as those students who began at the four-year school, and do well enough to garner similar job opportunities and wages as the “native” four-year students. Also, many four-year eligible post-secondary students are choosing the community college for their first two years of study to defray high costs of higher education. When they transfer, these highly qualified students excel.”

Rifkin, T. (2000). Improving Articulation Policy to Increase Transfer. (Policy paper No. CC-00-5). Denver, Colorado: Education Commission of the States.

Dougherty, K. (1992). Community colleges and baccalaureate attainment. The Journal of Higher Education, 63(2), 188-214.



Recruit through community college advisors and community college faculty in fields such as CS/IT, business, criminal justice, and health<sup>1</sup>.

Persuade advisors to promote CS/IT career fields and provide them with recruitment materials for their community college students..

## Initiate

contact with community college advisors via email, informal meetings, or formal gatherings such as advisor workshops. Inform them about the community college version of this toolkit.

## Provide

community college student advisors with accurate, timely recruitment materials that emphasize the creativity and variety involved in information technology-related employment.

## Persuade

community college student advisors to consider CS/IT as a viable career and academic option for community college students even in the post-bust economy.

## Supply

community college advisors with technology career information pertinent to the local economy and employment sector, such as local CS/IT industry profiles, local technology job opportunities, and innovative uses of technology in your geographical area.

*1: Recruitment material survey data suggests students studying in the business, criminal justice, and health fields were particularly persuaded by recruitment materials to- a). change attitudes towards CS/IT study, and b). consider studying CS/IT subjects in college.*

# 3

**Remember: Transfer is gold**  
Construct transfer pathways that are efficient for students and easily understood by both students and advisors.

Transfer-savvy community college students complete their general education requirements at the community college so they are admitted as juniors and are ready to focus on major requirements at the four-year institution.

## Provide

contacts for course equivalency experts who can help devise a transfer-ready academic plan before students take courses to avoid wasting time and money on courses that do not transfer to the four-year CS/IT program.

<http://www.cccs.edu/EdServices/Transfer.html>

Kane, M., Beals, C., Valeau, E., & Johnson, M. J. (2004). Fostering success among traditionally underrepresented student group: Hartnell College's approach to implementation of the math, engineering, and science achievement (MESA) program. *Community College Journal of Research and Practice*(28), 17-26.

## Collect

a list of statewide or regional CS/IT program contact names that span two and four year institutions, so that faculty, advisors, and administrators can assist students in planning for CS/IT program transfer.

Crain, R., & Prouty, R. (1994). Community College and University Cooperation in Engineering and Engineering Technology in the State of Washington. Paper presented at the Frontiers in Education Conference.

## Ensure

that your CS/IT program's website addresses student transfer from community college, including the transfer application procedure, departmental advisor contact information, transfer students' success strategies, and course equivalency information related to the CS/IT department.

Example:

<http://www.mscd.edu/academic/scolas/csi/csifacts.html>

## Offer

four-year CS/IT program scholarship and grant information to potential transfer students.

National Examples:

<http://www.nsf.gov/funding/>

[http://www.swe.org/stellent/](http://www.swe.org/stellent/idcplg?IdcService=SS_GET_PAGE&ssDocName=swe_000524&ssSourceNodeId=63)

[idcplg?IdcService=SS\\_GET\\_PAGE&ssDocName=swe\\_000524&ssSourceNodeId=63](http://www.swe.org/stellent/idcplg?IdcService=SS_GET_PAGE&ssDocName=swe_000524&ssSourceNodeId=63)

Colorado institution-specific examples:

[http://www.nmt.edu/](http://www.nmt.edu/prospective/admin/sch/green.htm)

[prospective/admin/sch/green.htm](http://www.nmt.edu/prospective/admin/sch/green.htm)

[http://www.western.edu/](http://www.western.edu/admissions/transfer-scholarships.html)

[admissions/transfer-scholarships.html](http://www.western.edu/admissions/transfer-scholarships.html)

[http://www.unco.edu/OFA/scholarships/](http://www.unco.edu/OFA/scholarships/undergrad/undergrad.asp#colo_res_tran_scholarships)

[undergrad/undergrad.asp#colo\\_res\\_tran\\_scholarships](http://www.unco.edu/OFA/scholarships/undergrad/undergrad.asp#colo_res_tran_scholarships)

# 4

## Get 'em, Keep 'em and Graduate 'em

Understand the needs particular to community college students and accommodate them whenever possible to help with retention and completion rates in your CS/IT program

### Invite

transfer students and potential transfer students to visit your department, sit in on classes, and meet with members of women in computer science groups, and local chapters of the Society of Hispanic Engineers and National Society of Black Engineers. Example: <http://carbon.cudenver.edu/~bchlebus/Seminar/index.html>

### Offer

night and weekend sections of core IT courses so students with work and family responsibilities can succeed in the IT program.

US Department of Education, N. C. f. E. S. (2003). Community College Students: Goals Academic Preparation and Outcomes (No. 2003-164). Washington, D.C.: NCES.  
Cohen, A., & Ignash, J. (1993). The scope and transferability of occupational courses in the two-year college. *Community College Review*, 21(3), 68-76.

Today's undergraduate college student is more likely to hold a job, have family responsibilities, and commute to and from campus. Making these recommended changes will not only benefit transfer students from the community college, but also benefit the ever-changing, diverse population of undergraduate students.

Coley, R. (2000). *The American Community College Turns 100: A Look at Its Students, Programs, and Prospects. Policy Information Report.* (policy paper No. JC 000 373). Princeton, NJ: Educational Testing Service.  
Hansen, E. (1998). Essential demographics of today's college students. *American Association of Higher Education*

### Cultivate

mentorships and transfer centers in your CS/IT department for transfer students.

Anderson-Rowland, M., Banks, D., Zerby, D., & Chain, E. (2005). The METS Center: A Place Where Community College Transition Students Encourage Each Other in Obtaining an Engineering Degree. Paper presented at the 2005 WEPAN/NAMEPA Joint Conference  
Zamani, E. (2001). Institutional responses to barriers to the transfer process. *New Directions for Higher Education*(114), 15-24.

### Allow

multiple avenues for student coursework assistance and guidance through email, telephone, and internet chat tutoring sessions in addition to office hour appointments.

Anderson-Rowland, M., Banks, D., Zerby, D., & Chain, E. (2005). The METS Center: A Place Where Community College Transition Students Encourage Each Other in Obtaining an Engineering Degree. Paper presented at the 2005 WEPAN/NAMEPA Joint Conference.  
Gray, T., & Dickmann, E. (1998). Student voices in the transfer process: Do we hear them? Do we listen? *Community College Journal of Research and Practice*, 22(5), 541-558