

# Offer a Bridge Program: Bolster Community College to Four-Year Student Success

## WHAT IS A BRIDGE PROGRAM?

The purpose of a bridge program is to help students develop the skills, knowledge, and confidence necessary to succeed in a specific baccalaureate program. Most bridge programs are designed for high school or community college transfer students and typically take place during the summer before the student begins coursework at the four-year level.

## WHY OFFER A BRIDGE PROGRAM IN COMPUTER SCIENCE?

Community college and four-year computer science classes are different. The CS coursework at a community college tends to be more applied, while the four-year coursework tends to be theoretical. The skills needed to succeed in each type of program are very different and can leave transfer students feeling incompetent and unsure of themselves. Research has found that bridge programs in computer science are effective in helping transfer students obtain the competence and self-efficacy necessary to succeed in the more rigorous baccalaureate programs.<sup>1</sup>

## WHAT DOES A SUCCESSFUL BRIDGE PROGRAM IN COMPUTER SCIENCE LOOK LIKE?

Successful bridge programs in computer science vary in terms of length (four weeks to six months) and curriculum. Pair-programming, peer-led collaborative learning environments, and learner-centered design and research programs<sup>2</sup> have all been successful in attracting and retaining non-traditional students in CS programs.<sup>3</sup> Research also suggests that curriculum with an emphasis on creating games<sup>4</sup> or manipulating and creating media can also aid in engaging and retaining students.

## References

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<sup>1</sup> Gilmer, 2008; Walpole et al., 2008; Fisher & Margolis, 2002; Roberts, Kassianidou, & Irani, 2002) and have positive effects on retention (Ezer, Vilner, & Zur, 2008; Gilmer, 2008; Barnes et al., 2007; Leutenegger, 2006; Cohoon, 2002.

<sup>2</sup> Barnes et al., 2007.

<sup>3</sup> Cohoon, 2002.

<sup>4</sup> Barnes et al., 2007; Leutenegger, 2006.