Megas and Gigas Educate (MaGE): A Curricular Peer Mentoring Program

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The Megas and Gigas Educate (MaGE) program is a peer mentoring program being developed at Mount Holyoke College, a liberal arts college for women, for the introductory CS curriculum. Consistent with national trends, interest in CS is rising rapidly; current resources cannot meet demand while maintaining quality feedback and pedagogy. Supported by a Google Computer Science Capacity Award, MaGE has three main objectives: (1) to triple enrollment capacity over 3 years in introductory courses; (2) to increase enrollment and retention for women and other underrepresented groups; (3) to train students to educate, mentor, and support others in inclusive ways. Trained undergraduate students act as peer mentors to beginner students, providing close interaction and assisting with feedback. MaGE is currently being piloted in the introductory CS1 course. Enrolled students bring varying interests, including Art, History, Biochemistry, Economics and Engineering; most students have no prior programming experience. Each CS1 student is assigned a peer *Giga Education Mentor* (or GEM) in a 9:1 ratio. GEMs have undergone a rigorous training course that raises awareness of the role of social identity in learning, emphasizes active learning within computer science, and provides preparation for being technical peer mentors. While research supports the need for culturally-sensitive, inclusive training as part of the curriculum, we know of few peer-based models in CS that explicitly include this education. By building a diverse set of peer role models and connecting with the pre-existing co-curricular *Megas and Gigas* mentoring program, MaGE seeks to effectively engage underrepresented students in computing.