Introductory computer science courses for both majors and non-majors must be engaging and exciting to successfully attract and retain a wide range of students: women and men, all races, and various economic backgrounds. Most computer science departments are not offering introductory computer science courses that do this. The new Georgia Tech course CS 1315, *Introduction to Media Computing*, has been successful in making this introductory course engaging, exciting and attractive to contemporary college students. We propose to adapt Georgia Tech’s CS1315 to two very different introductory computer science courses at University of Illinois–Chicago (UIC) in the hopes of also making these courses engaging, exciting and attractive to a large number and variety of students.

One course, intended for students *not* majoring in computer science, will be what *Computing Curricula 2001* referred to as a “general fluency” course, whose goals are “to satisfy general student interests in computing” and “to help produce more informed citizens with respect to information technology.” This course will focus on fluency in *computer science, not* in “tools” (i.e., spreadsheets or word processors). The intended enrollment of this course will be very different from the students taking Georgia Tech CS1315: students overwhelmingly with majors outside of Science, Technology, Engineering, and Mathematics, rather than students at an institute of technology.

The other course will be intended as a gentle introduction to both computer science generally and programming in particular for the roughly 50–70% of incoming computer science majors who have very little background in computer programming. The remaining computer science majors who do have a background in programming would be offered a placement exam that would place them directly into the next course, an aggressively paced traditional CS 1 course. By removing these programming “hotshots” from the first course, those equally qualified but less experienced students will take a course better suited to engage and excite them. This will level the playing field when all students are recombined in the aggressive paced traditional CS 1 course and improve the retention rate of these less experienced computer science majors.

**Intellectual Merit:** Better ways to teach basic computer science all students will be developed. Also, a course that makes the computer science major more widely available to students of varying backgrounds will be developed. Metrics on the success of these courses in general, and also on their ability to attract and retain women, African American, and Hispanic students in particular will be gathered, and compared to the Georgia Tech course.

**Broader Impact:** Better ways to educate all students about computer science are vitally important. Likewise, it is vitally important to make majoring in the growth field of computer science possible for students with varied backgrounds. The courses that will be created will achieve these goals. Furthermore, they will be considerably easier for most other schools to adopt than the Georgia Tech course, because UIC is a more typical university, with somewhat selective admissions, but not Georgia Tech’s extremely selective admissions.