New Computer Science Program Objectives
(DRAFT – March 6, 2008)

1. Effectively communicate in both oral and written form in scientific, academic business, and other professional contexts.

2. Demonstrate competence in mathematical skills both constructive and analytic in the domains of algebra, discrete structures, calculus, and probability/statistics.

3. Apply scientific principles and problem-solving methodology to the design and analysis of software, hardware, and systems at several levels of integration/abstraction.

4. Apply the principles of critical thinking inherent in the theoretical foundations of computer logic and science.

5. Develop expertise in programming and debugging in at least one general-purpose programming language.

6. Select and apply appropriate programming languages in the design of applications software.

7. Apply data structures and algorithmic design strategies in the programming and software engineering process when designing large software projects.

8. Construct and analyze computer organization and architecture.

9. Practice ethical principles in academic and professional contexts.

10. Work effectively as part of a team in software or hardware design, deployment or integration. This includes demonstrating effective leadership as well as functioning as a member of a team.