Academic Learning Compact

Computing & Information Sciences (Computer Science)

Program Mission Statement

The School of Computing is dedicated to the promotion of an academically exciting and progressive intellectual climate, characterized by a superior program of instruction, peer-recognized scholarship, effective support services, and productive professional community involvement. In particular, the School is committed to offering undergraduate and graduate degree programs observing national standards, maintaining and expanding course offerings to keep pace with the rapid development of computer theory and computer technology. In recognition of its leadership position in computing, the School supports the need for instruction in computing as required by other University programs and advocates faculty participation in collaborative computer-related projects involving other professionals or colleagues. The vitality of the School is enhanced by encouraging ongoing faculty research and development, ultimately serving the instructional mission of the School and providing both Northeast Florida and the nation with a wellspring of knowledge and wisdom in computing.

The Computer Science Program requires a strong background in mathematics and science, including calculus and calculus-based physics. It is recommended for those interested in the more technically and scientifically oriented areas of computing. It emphasizes course work in computational structures, systems software, data structures, artificial intelligence, algorithms, data modeling, modeling and simulation, computer graphics, compilers, operating systems, interfacing, computer architecture, robotics, and other applications and theory.

Student Learning Outcomes

Graduates will be able

Content/Discipline-Specific Knowledge/Skills

- Analyze legal, social, security, and ethical issues that arise in the computer science discipline both locally and globally and recognize the need for continued professional development. (ABET outcomes e,g,h)

Communication Skills

- Work effectively in a collaborative setting (ABET outcome d)

- Communicate effectively in both oral and written forms. (ABET outcome f)

Critical Thinking Skills

- Apply design and development principles in the construction of software systems of varying complexity. (ABET outcomes a,b,c,i,j,k)

Assessment Approaches

Student Learning Outcomes are categorized based on attainment of: 1) Content/Discipline-Specific Knowledge/Skills; 2) Communication Skills –Collaboration and Oral & Written Communications; 3) Critical Thinking Skills. A number of direct and indirect assessment approaches will be employed to assess attainment of the outcomes.

The outcome corresponding to Content/Discipline-Specific Knowledge/Skills is assessed directly in CIS3253 (Legal and Ethical Issues in Computing). The activities in the different rubrics of assessment employed in this course require students to write papers and essay-type answers to test questions.

The outcome corresponding to Collaboration Skills is assessed directly in CIS3253 (Legal and Ethical Issues in Computing) and CEN4010 (Software Engineering). This assessment is carried out primarily in team project situations. Each team member (student) provides a rating of other team members on several questions on the evaluation instruments provided by the Comprehensive Assessment of Team Member Effectiveness (CATME) tool.

The outcome corresponding to Oral Communication Skills is assessed directly in several courses which require oral presentations. Students who wish to use an oral presentation in any of these courses will have the instructor complete and "Oral Communications Form" indicating the fulfillment and the instructor's assessment of the presentation(s).

The outcome corresponding to Written Communication Skills is assessed directly in CIS3253 (Legal and Ethical Issues in Computing) in which students write 2000-word term paper.

The outcome corresponding to Critical Thinking Skills is assessed directly through performance measures related to the completion of systems requirements analyses documents; systems design documents (CEN4010); a functioning assembler and a functioning translator (COP3404, COP4620).

Indirect measures of assessment in all three categories include employer or alumni surveys; student perception surveys; graduate school placement rates, etc. These surveys record responses of "Strongly Disagree", "Disagree", "Neutral", "Agree", or "Strongly Agree" to several questions related to the student outcomes. A certain percentage of responses of "Agree" or "Strongly Agree" is used as the threshold for the level of attainment of the associated outcome.