



# Graduate Academic Learning Compact

## Computing - Computing & Info Sciences

### Program Mission Statement

The mission of the Masters in Computer and Information Sciences in the School of Computing is to support the vision of the School of Computing to provide a nationally and internationally recognized center of learning in computing, focusing on application of state-of-the-art computer technology, and supporting regional aspirations to excel in computer-related enterprise. The objective of the program is to provide graduate degrees in computer science, information systems, and software engineering, in an educational atmosphere, both intellectual and practical, extending the frontiers of knowledge to the betterment of humankind. In particular, while pursuing the graduate program, students are expected to complete at least half of their course work at an advanced-level, conduct research and report their findings as a thesis document. Upon graduation, they are expected to be in professional situations in which they can apply technical knowledge and up-to-date skills in analyzing, designing, and developing efficient computerized solutions in professional environments, and engage in continuous professional development. Students are expected to complete 36 credit hours of study which include 30 hours of computing course work in state-of-the-art topics and 6 hours of individual research culminating in a professional publishable thesis document. Each course will address current topics in computing where the student is expected to learn current topics and conduct research in cutting edge technology. Partnering with local business affiliates is accomplished through the computing advisory board (CAB) which meets regularly.

Monthly meeting occur with our partners including Stein Mart, SportsYappe, TEKsystems, Kemper Corporation, FIS, Allstate, FIS, JAXUSA Partnership, Visual Solutions, Inc., Availity, RF Smart - ICS, American Recruiting & Consulting, Interactive Resources, Merrill Lynch, Alluvion Staffing, IBM, Harris Computer Systems, Tyrofy, JEA, Meridian Technologies, and Analytics Partners. These meetings provide guidance in curricular areas, faculty development, and guide the vision of the school. Faculty research areas include high performance computing, parallel computing, cyber security, RFID research, Big Data, Data Mining, Data Analytics, and the Internet of Things, Research is published in high quality journals and conferences.

### Student Learning Outcomes

#### Graduates will be able to:

##### Knowledge of Literature of Discipline (req)

- Demonstrate skills in conducting in-depth literature reviews of concepts relevant to the computing discipline
- Demonstrate skills in collaborative development of computing systems
- Demonstrate understanding and recognition of ethical issues as they pertain to the computing discipline

##### Independent Research/ Professional Practice (req)

- Demonstrate skills in applying learned concepts in the analysis of complex computing systems
- Demonstrate ability to extend learned concepts in the development of new and feasible solutions to computing problems. Examples include the development of parallel applications to distribute data to multiple workers. Students implement projects which are assessed on a 25 point scale determining degree of success.

##### Communication (opt)

- Demonstrate scientific and technical writing skills
- Demonstrate presentation skills of scientific and technical material

### Assessment Approaches

Student Learning Outcomes are categorized based on attainment of: 1) Skills in the analysis of complex computing systems; 2) Knowledge of the Literature of the Discipline; 3) Skills to extend learned concepts; 4) Skills in collaborative development of computing systems; 5) Skills in recognition of ethical issues as they pertain to the computing discipline; 6) Scientific and technical writing skills; and 7) Oral presentation skills.

The outcome corresponding to analysis of complex computing systems is assessed directly in COP6611 (Advanced Operating Systems) and

COP6616 (Parallel Computing) where the students completed projects requiring the analysis and implementation of complex systems. A certain percentage (80%) of student performance ratings of "Above Average" or better is used as the threshold for level of attainment of the associated outcome.

The outcome corresponding to knowledge of the literature of the discipline is assessed directly from the evaluation of the thesis document by the thesis committee. A certain percentage (80%) of student performance ratings of "Above Average" or better is used as the threshold for level of attainment of the associated outcome. Each committee member provides a report indicating the level of accomplishment achieved.

The outcome corresponding to extending learned concepts are directly assessed in COP6616 (Parallel Computing) where students completed projects that required the extension of concepts learned. A certain percentage (80%) of student performance ratings of "Above Average" or better is used as the threshold for level of attainment of the associated outcome. Each students' project is individually assessed to determine the degree learned concepts have been extended.

The outcome corresponding to collaboration skills is directly assessed using the CATME tool or equivalent in CEN6016. A certain percentage (80%) of student performance ratings of "Above Average" or better is used as the threshold for level of attainment of the associated outcome.

The outcome corresponding to recognition of ethical issues is directly assessed in the evaluation of the thesis document by the thesis committee. A certain percentage (80%) of student performance ratings of "Above Average" or better is used as the threshold for level of attainment of the associated outcome. Each member of the thesis committee completes a form evaluating the ethical component of the thesis.

The outcome corresponding to scientific and technical writing skills is directly assessed in the evaluation of the thesis prospectus document by the thesis committee. A certain percentage (80%) of student performance ratings of "Above Average" or better is used as the threshold for level of attainment of the associated outcome. Each students' thesis document is evaluated by the 3 members of the student's committee, by the Director of the School of Computing, the Dean of the College of Computing, Engineering, and Construction, and the Graduate School Dean.

The outcome corresponding to oral presentation skills is directly assessed in the evaluation of the thesis defense presentation by at least 5 faculty members. A certain percentage (80%) of student performance ratings of "Above Average" or better is used as the threshold for level of attainment of the associated outcome. Each individual attending the thesis presentation completes an assessment form evaluation of the presentation of the thesis topic.