MS in Computer Science Program in Department of Computer and Information Science and Engineering

Academic Assessment Plan

2012-2013

College of Liberal Arts and Sciences

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Academic Assessment Plan for M.S. Program in Computer and Information Science and Engineering Department

College of Liberal Arts and Sciences

A.   Mission

CISE Mission:

The Department of Computer and Information Science and Engineering is concerned with the theory, design, development and application of computer systems and information processing techniques. The mission of the CISE Department is to educate undergraduate and graduate majors as well as the broader campus community in the fundamental concepts of the computing discipline, to create and disseminate computing knowledge and technology, and to use our expertise in computing to help society solve problems.

College of Liberal Arts and Sciences Mission

The College of Liberal Arts and Sciences constitutes the intellectual core of the university. Its principal mission is to lead the academic quest to understand our place in the universe, and to help shape our society and environment. The College pledges to ensure equitable access for all of its constituencies present, drawing strength from our rich heritage of racial, ethnic and gender diversity. Through teaching, research and service, the College continually expands our knowledge and practice in the most fundamental questions in the arts, humanities, social sciences, and natural and mathematical sciences.

At the undergraduate level, students acquire an intellectual foundation based on a well-rounded and comprehensive education designed for an increasingly technological and rapidly changing society. At the graduate level, students master a specialized body of knowledge and pursue original research under the guidance of outstanding faculty.

As a public institution, the College serves society through its research programs to advance our knowledge and capabilities, through its teaching to prepare tomorrow's leaders, and through its outreach programs to ensure dissemination of the state of the art in areas ranging from languages and literatures, to social behaviors, to the fundamental laws of nature. The College captures the brightest ideals of intellectual inquiry and human values mirrored in society, and remains ever conscious that it must represent and reflect all segments of society to remain the intellectual core of the university.

University of Florida Mission

The University of Florida faculty renews its commitment to serve the citizens of Florida and educate students so they are prepared to make significant contributions within an increasingly

global community. In affirming the university's academic mission, we honor the human component of our mission: our students, faculty, staff and administrators; and recognize the importance of these human resources to the university's success. Towards this affirmation, the University of Florida faculty specifically encourages a campus-wide culture of caring.

It is the mission of the University of Florida to offer broad-based, exclusive public education, leading-edge research and service to the citizens of Florida, the nation and the world. The fusion of these three endeavors stimulates a remarkable intellectual vitality and generates a synthesis that promises to be the university's greatest strength.

The university maintains its dedication to excellent teaching and researching by creating a strong and flexible foundation for higher education in the 21st century. While the faculty remains committed to key aspects of the university's original mission, changing times will require that we continually expand and evaluate our academic aspiration. We do this in order to assure that quality education at the University of Florida remains the highest goal and most valued contribution to society.

The University of Florida belongs to a tradition of great universities. The faculty and staff of the university are dedicated to the common pursuit of its mission of education, research and service. Together with our undergraduate and graduate students we participate in an educational process that links the history of Western Europe with the traditions and cultures of all societies, that explores the physical and biological universes, and that nurtures generations of young people from diverse backgrounds to address the needs of our societies. The university welcomes the full exploration of our intellectual boundaries and supports our faculty and students in the creation of new knowledge and the pursuit of new ideas.

Teaching is a fundamental purpose of this university at both the undergraduate and graduate levels. Research and scholarship are integral to the education process and to the expansion of our understanding of the natural world, the intellect and the senses. Service reflects the university's obligation to share the benefits of its research and knowledge for the public good.

These three interlocking elements span all of the university's academic disciplines and represent the university's commitment to lead and serve the State of Florida, the nation, and the world by pursuing and disseminating new knowledge while building upon the experiences of the past. The University of Florida aspires to advance the state, nation and the international community by strengthening the human condition and improving the quality of life.

Mission Alignment:

Clarity – the CISE mission is clear, concise, and addresses teaching, research, and service
Alignment – the program mission clearly supports the College and University missions.

B. Student Learning Outcomes and Assessment Measures

SLO Type	Student Learning Outcome	Assessment Method	Degree Delivery
1. Knowledge	Students identify, formulate, and solve computer science and engineering problems	Assess the achievements in the assignments and exams of COT 5405 Analysis of Algorithms	Campus
2. Knowledge	Students critically read computer science and engineering literature	Student write a paper surveying the literature on a selected topic from COT 5405 Analysis of Algorithms	Campus
3. Skills	Students use the techniques, skills, and tools necessary for computer science and engineering practice at an advanced level	Required homework, projects, and other deliverables from COT 5405 Analysis of Algorithms	Campus
4. Professional behavior	Students demonstrate professional and ethical responsibility	Students must take an exam with questions on ethics.	Campus
5. Professional behavior	: Students communicate effectively	Exit interview	Campus

C. Research

The department establishes six research areas:

1. Analysis of Algorithms, modeling and art

2. Computer systems

3. Computer vision and intelligent systems

4. Database and information systems

5. High-performance computing and algorithms

6. Networks and security

Each area has 4-7 faculty members doing leading-edge researches in the respective fields. Each faculty member supervises a number of graduate students.

Our research funding comes from both federal agents and leading computing industries, which have been used to support both Ph.D. and Master students. Master students can engage in research projects supervised by our faculty members.

D. Assessment Timeline

Program: MS in Computer Science
College: College of Liberal Arts and Sciences

Assessment SLOs	Assessment 1	Assessment 2
Knowledge		
#1	Final exam	
#2	Literature review	
Skills		
#3	Final exam	
Professional Behavior		
#4	On-line ethics tutorial & quiz	
#5	Final exam	Literature review

E. Assessment Cycle

Program: MS in Computer Science
College: College of Liberal Arts and Sciences

Assessment Cycle for:

Analysis and Interpretation: Fall Term beginning 12/13
Program Modifications: Completed by Following Spring Term
Dissemination: Completed by End of following Spring Term

Year SLOs	10-11	11-12	12-13	13-14	14-15	15-16
Content Knowledge						
#1			Fall 12		Fall 14	
#2			Fall 12		Fall 14	
Skills						
#3				Fall 13		Fall 15
Professional Behavior						
#4			Fall 12		Fall 14	
#5			Fall 12		Fall 14	

F. Measurement Tools

Knowledge and Skill: We distribute the following evaluation form (see Table 2) to the instructor teaching COT5405. The instructor makes a thorough evaluation based on student's performance in the literature review and the final exam. The instructor maintains this data and summarizes the results in Table 1.

Professional Behavior: The department establish online ethics tutorial and quiz for all graduate students. All students must take the tutorial and quiz before graduation. Students who do not reach to the minimum requirement (answer 90% of the questions correctly), are allowed to retake the test again until they reach the goal.

Table 1: STUDENT LEARNING OUTCOME

Please rate the students' performance on the following four learning outcomes using the final exam and literature review assessment tools. Identify the appropriate numbers to indicate the level of performance in each outcome.

SCALE: 1=poor, 2=fair, 3-good, 4=very good, 5=excellent					
1. Ability to identify, formulate, and solve computer science and engineering problems.	1	2	3	4	5

2. Ability to critically read and integrate engineering literature.	1	2	3	4	5
3. Ability to use the techniques, skills, and tools necessary for computer science and engineering practice at an advanced level.	1	2	3	4	5
4. Ability to communicate effectively.	1	2	3	4	5

G. Assessment Oversight

Here, list the names and contact information of those who oversee the assessment process in your program. Add or delete rows as needed.

Name	Department Affiliation	Email Address	Phone Number
Paul Gader	CISE	pgader@cise.ufl.edu	352-392-1527
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Figure 1. University of Florida Graduate/Professional Program Assessment Plan Review Rubric

Related resources are found at http://www.aa.assessment.edu

Program: Year:

Component	Criterion	Met	Partially Met	Not Met	Comments
		Rating			
Mission Statement	Mission statement is articulated clearly.	x			
	The program mission clearly supports the College and University missions, and includes specific statements describing how it supports these missions.	x			
Student Learning Outcomes (SLOs) and Assessment Measures	SLOs are stated clearly.	x			
	SLOs focus on demonstration of student learning.	x			
	SLOs are measurable.				
	Measurements are appropriate for the SLO.	x			
Research	Research expectations for the program are clear, concise, and appropriate for the discipline.	x			
Assessment Map	The Assessment Map indicates the times in the program where the SLOs are assessed and measured.	x			
	The Assessment Map identifies the assessments used for each SLO.	x			
Assessment Cycle	The assessment cycle is clear.	x			
	All student learning outcomes are measured.	x			
	Data is collected at least once in the cycle.	x			
	The cycle includes a date or time period for data analysis and interpretation.	x			
	The cycle includes a date for planning improvement actions based on the data analysis.	x			

	The cycle includes a date for dissemination of results to the appropriate stakeholders.	x			

University of Florida Graduate/Professional Program Assessment Plan Review Rubric, continued

Component	Criterion	Rating			Comments
		Met	Partially Met	Not Met	
Measurement Tools	Measurement tools are described clearly and concisely.	x			
	Measurements are appropriate for the SLOs.	x			
	Methods and procedures reflect an appropriate balance of direct and indirect methods.	x			
	The report presents examples of at least one measurement tool.	x			
Assessment Oversight	Appropriate personnel (coordinator, committee, etc.) charged with assessment responsibilities are identified	x			