

Summary Report

Expected Programs Outcomes, Assessments and Utilization of Results

School of Computer and Information Sciences

Learning Objectives			
Specialization			
Computer Science	Information Systems	Information Technology	Graduate
<p>CS1. Analyze, design and implement a computerized solution to a “real life” problem</p> <p>CS2. Write technical documents such as specifications, design and users’ manuals in a specified format</p> <p>CS3. Orally present a computerized project</p> <p>CS4. Be prepared for further graduate study</p> <p>CS5. Have an ability to function on multi-discipline teams</p> <p>CS6. Be cognizant of ethical issues and societal concerns relating to computing in society</p> <p>CS7. Understand the impact of computing solutions in a global and societal context</p> <p>CS8. Recognize the need for, and possess the ability for life long learning</p>	<p>IS1. Analyze, design and implement an information system in a “real life” environment</p> <p>IS2. Write technical documents such as specifications, design and users’ manuals in a specified format</p> <p>IS3. Orally present an information system project</p> <p>IS4. Be prepared for further graduate study</p> <p>IS5. Have an ability to function on multi-discipline teams</p> <p>IS6. Be cognizant of ethical issues and societal concerns relating to computing in society</p> <p>IS7. Understand the impact of computing solutions in a global and societal context</p> <p>IS8. Recognize the need for, and possess the ability for life long learning</p>	<p>IT1. Use and apply current technical concepts and practices in the core information technologies</p> <p>IT2. Analyze, identify and define the requirements that must be satisfied to address problems or opportunities faced by organizations or individuals</p> <p>IT3. Effectively design IT-based solutions and integrate them into the user environment</p> <p>IT4. Assist in the creation of an effective project plan</p> <p>IT5. Identify and evaluate current and emerging technologies and assess their applicability to address the users’ needs</p> <p>IT6. Analyze the impact of technology on individuals, organizations and society, including ethical, legal, security and global policy issues</p> <p>IT7. Demonstrate independent critical thinking and problem solving skills</p> <p>IT8. Collaborate in teams to accomplish a common goal by integrating personal initiative and group cooperation</p> <p>IT9. Communicate effectively and efficiently with clients and peers both orally and in writing, using appropriate terminology</p> <p>IT10. Recognize the need for continued</p>	<p>GRAD1. Integrate advanced knowledge and theory of the computing disciplines into research and applications</p> <p>GRAD2. Demonstrate advanced knowledge and depth of knowledge in the core areas of computing</p> <p>GRAD3. Demonstrate advanced knowledge and depth of knowledge in selected areas of computing</p> <p>GRAD4. Use scientific inquiry to identify research issues of computing and engage in and carry out effective research</p> <p>GRAD5. Provide leadership to the computing profession and influence the focus and direction of the future of computing</p> <p>GRAD6. Make effective oral presentations about computing solutions</p> <p>GRAD7. Be academically prepared for the PhD in computing</p>

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		learning throughout their career	
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Learning Objectives	Assessment Measure Employed	Problem Identified	Utilization of Assessment Results for Program Improvement
CS1 CS2 CS4 CS8	PROGRAM: CSC Specialization 1) Student performance in CIS230 2) Instructor feedback from CIS230 3) Review of other CSC programs	Role and placement of MA267. Would students be better prepared for CIS230 if MA 267 were a prerequisite?	1) Review of CIS230 course objectives 2) Review of MA267 course objectives 3) Meeting with Math faculty to revise MA267 4) Change prerequisite structure for CIS230 to be MA267 and for MA267 to be MA112/115.
CS1 CS6 CS7 CS8	PROGRAM: CSC Specialization 1) Student feedback in exit interviews 2) Student feedback from student council 3) Course review from retreat	CIS 110 was not of value in curriculum. How could the CIS110 be made more informative and provide necessary skills needed by major? This included the use of application software, programming, use of OS, web and networks.	1) Form a committee to review CIS110 2) Review CIS110 course objectives 3) Design a suite of hands-on labs for CIS110 4) Prototype the course in Fall & Spring
CS1 CS2 CS3 CS4 CS5 CS8	PROGRAM: CSC Specialization 1) Student feedback in exit interviews 2) Advice from Advisory board 3) Review of other CSC programs 4) Review of papers from SIGCSE	More hands-on lab activities. How could the course concepts central to computing be reinforced throughout the curriculum?	1) See CIS110 issues above 2) Continue active partnership with ATI/Mentor Graphics 3) Expand suite of demonstration projects in CIS322, CSC320 and CSC412/512. 4) Programming projects in CIS322

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<p>Use/Apply current IT technology in a practical setting</p>	<p>Program: <u>IT Specialization</u></p> <ol style="list-style-type: none"> 1. IT senior exit interviews 2. Review of other IT programs 3. Advice from Industry Advisory Board 	<p>More hands on activities</p>	<ol style="list-style-type: none"> 1. Tri-annual course review by IT and CIS faculty is ongoing for all classes. 2. Several IT courses (eg. ITE 453, ITE380) added hands-on activities or labs. 3. Design proposals were drafted for laboratory equipment to support increased hands-on activities.
<p>Demonstrate an understanding of hardware and system software capabilities and limitations.</p>	<p>Program: <u>IT Specialization</u></p> <ol style="list-style-type: none"> 1. IT senior exit interviews 2. Data from the Dean's Senior Exit Interviews 3. Review of emerging curriculum standards document from Information Systems and Information Technology. 4. Faculty discussions at semi-annual retreats about the direction and need for a new course 	<p>ITE272 Re-Design</p>	<ol style="list-style-type: none"> 1. The introductory IT course sequence was reviewed in depth by a committee. 2. Topics were selected for inclusion in ITE271 Introduction to IT I course. 3. Topics were selected to a new ITE272 Introduction to IT II course. 4. Potential labs, assignments and hands-on activities were drafted and reviewed.

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			5. Hardware and software was reviewed and selected. 6. Course was pilot tested and ultimately added to the curriculum replacing the previous course.
Use/apply technical concepts and practices in core information technologies.	Program: <u>IT Specialization</u> 1. IT senior exit interviews. 2. Review of industry needs and trends information, including US Department of Labors Statistics. 3. Review of other IT programs 4. Student requests from both current and potential students.	Need for Focus Track in Networks	1. Developed a three course sequence to provide this content. 2. Developed lab equipment specifications to facilitate these courses. 3. Began development and testing of potential lab activities. This helps define the needed lab capabilities. 4. Completed University requirements to new courses. 5. Projected start date is Fall 2004.
IS 8 IS 4 IS 5	Program: IS Specialization ACM & ABET curricula recommendations	ISC Undergraduate: ISC math & statistics	ABET provides guidelines for Information Systems programs. One of the recommendations under consideration by the ISC faculty is whether to require discrete mathematics in the ISC program and, if it is required, how best to accommodate the requirement.
IS 6 IS 7 IS 8	Program: IS Specialization Various sources: Informal discussions with	ISC Undergraduate: Placement in the ISC curriculum of the course entitled <i>Information Systems in Organizations</i>	The major concern was that this course appeared too late in the curriculum to be meaningful for ISC students. Instead of providing a preview of required knowledge

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	undergraduates, ABET ISC self-study ABET ISC final review ISC faculty review		and skills and an understanding of the relationships among of Information Systems, Information Technology, Organizational Needs, and Management, the course was viewed as repeating material already learned at a greater depth. The course in question was renumbered from ISC 350 to ISC 245. The prerequisites were changed to be CIS 120, the first programming course.
IS4 IS5 IS7 IS8	Program: IS Specialization Various sources: ABET ISC self-study ABET ISC final review ISC faculty review	ISC Undergraduate: Core curriculum update	When preparing the ABET self-study, a mapping between our curriculum and the national model curriculum, IS 2000 was developed. An analysis of the mapping showed that a required course ISC 353, Information Systems Applications Development contributed much less than the ISC 459, Information Systems Application Design and Implementation in terms of support for the IS 2000 model curriculum. The ISC faculty agreed to replace ISC 353 as a required course with ISC 459.
IS1 IS4 IS5 IS7 IS8	Program: IS Specialization Various sources: ISC faculty review Bulletin changes in the College of Business New program planning	ISC Undergraduate: ISC Environment revisions	As a consequence of changes made to course prerequisites and the minor requirements in the College of Business, the Information Systems environment was updated. Previously three optional sets of three courses were offered to supplement the five commonly required courses. These optional sets have been replaced by requiring three electives. A second Information Systems environment is

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			anticipated if a graduate program for Health Informatics is approved. The goal will be to allow some additional options for undergraduates to prepare for direct entry into this program without additional prerequisites.
IS1 IS4 IS5 IS7 IS8	Program: IS Specialization Various sources: ISC faculty review Course changes in the Computer Science and Information Technology programs	ISC Undergraduate: Core curriculum update	Changes made to CIS 322 to provide computer science application development experiences would not be appropriate for Information Systems undergraduates. The Information Technology program redesigned ITE 272 to include a hands-on approach that is compatible with the needs of ISC undergraduate program requirements. The ISC faculty approved requiring ITE 272 instead of CIS 322.
NONE SPECIFIC Administrative Quality Control Relevant to: GRAD1 GRAD2 GRAD3 GRAD4 GRAD5 GRAD6 GRAD7	Program: MS CIS CIS Graduate Faculty Review	CSC/ISC Graduate: Admission Criteria revision	Information and guidelines obtained from GRE workshops at the Conference of Southern Graduate Schools in February, 2003 were shared with the CIS graduate faculty. After reviewing the information and recommendations from the Graduate Director, the CIS graduate faculty approved new procedures for review of admission of applicants based upon examination of all test scores: GRE verbal, quantitative, analytical writing, TOEFL, and TOEFL essay. Minimum scores (except for the University minimum for the TOEFL) were removed from the bulletin. A new review form was prepared that permits use of a CIS graduate admission review committee

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			<p>consisting of the graduate director (who, at this time, is also the ISC coordinator), the CSC coordinator, and one additional member of the CIS graduate faculty. When there is doubt about the eligibility of a candidate, the applicant's file is reviewed by members of the committee with a majority decision required for the recommendation that is forwarded to the Dean of the Graduate School. We have also discontinued accepting as Non-Degree graduate students those students who did not satisfy the GRE requirements.</p>
<p>NONE SPECIFIC Administrative Quality Control</p> <p>Relevant to: GRAD1 GRAD2 GRAD3 GRAD4 GRAD5 GRAD6 GRAD7</p>	<p>Program: MS CIS</p> <p>Periodic Review of Orientation Process</p>	<p>CSC/ISC Graduate: Initial Advising: Placement of New Graduate Students</p>	<p>A document for assessing graduate program prerequisites taken in undergraduate or graduate studies was developed for initial placement in the program. The form provides a means for Admissions to assist with the assessment of previous undergraduate course work for required supporting courses and for the ISC coordinator and the CSC coordinator to evaluate the computing prerequisites. The outcome of this process is a preliminary plan of study for completing any prerequisites based upon the student's chosen major. The applicant may challenge the assessment by providing additional documentation regarding a prerequisite decision. See item 7. for the use of this document in conjunction with orientation experiences.</p>

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<p>NONE SPECIFIC Administrative Quality Control</p> <p>Relevant to: GRAD1 GRAD2 GRAD3 GRAD4 GRAD5 GRAD6 GRAD7</p>	<p>Program: MS CIS CIS Graduate Faculty Review</p>	<p>CSC/ISC Graduate: Orientation & Advising Survey</p>	<p>Information and ideas obtained from workshops on orientation workshops at the Conference of Southern Graduate Schools in February, 2003, resulted in an effort to prepare an exit survey for the School of CIS graduate students. The initial survey instrument was prepared until the end of the Spring semester but requires extensive revision--it is just not comprehensive enough. Completion of the survey is expected this semester and will be distributed to students who completed the comprehensive exams during Fall, 2003 and the Spring, 2004 semesters. An exit interview will also be scheduled this semester with those students from the group who are available on campus.</p>
<p>NONE SPECIFIC Administrative Quality Control</p> <p>Relevant to: GRAD1 GRAD2 GRAD3 GRAD4 GRAD5 GRAD6 GRAD7</p>	<p>Program: MS CIS Review of Advising appointment log</p>	<p>CSC/ISC Graduate: Failure to contact advisor for a meeting during University advising periods</p>	<p>The Computer Science and the Information Systems Coordinators are the advisors for graduate students in the School of CIS. Advising is often accomplished by appointment, email, and telephone. Students, especially those who are part-time students, become aware of the problem when they attempt to register and discover an advising hold. Typically, the student attempts to contact the advisor in various ways. Our solution has been to handle these requests as we are able, while reminding them of their obligation. However, this does not seem to be effective.</p>
<p>GRAD1</p>	<p>Program : MS CIS</p>	<p>ISC Graduate:</p>	<p>Based upon the MSIS 2000 guidelines, the</p>

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GRAD2 GRAD3 GRAD4 GRAD7	MSIS 2000: Model Curriculum and Guidelines for Graduate Degree Programs in Information Systems	ISC program prerequisites	ISC graduate faculty revised the supporting prerequisite requirements for Information Systems majors: the number of graduate statistics courses required was reduced from two to one to accommodate undergraduate CSC students who wish to choose ISC for their graduate degree; the accounting requirement was changed to a Business/Management course; the survey of calculus and the Organization Behavior course requirements were not changed. See item 6 for future changes brought on by changes to the undergraduate mathematics and statistics.
GRAD1 GRAD2 GRAD3 GRAD4 GRAD5 GRAD6	Program: MS CIS Various sources: Student and Faculty Research interests Current Issues	CSC/ISC knowledge, and research development	Offer relevant special topics in computing focusing on current issues and research interests: Data mining, Data security, Real time computing, Robotics.
GRAD1 GRAD2 GRAD3 GRAD6	Program: MS CIS	ISC Skills development	Integrate modern programming languages and techniques into existing courses: CIS 507, ISC 559, and ISC 561
NONE SPECIFIC Administrative Quality Control Relevant to: GRAD1 GRAD2 GRAD3 GRAD4	Program: MS CIS Various sources: Open discussions with students in Spring, Summer, & Fall 2003 CIS 518 classes, informal discussion with graduate advisees,	CSC/ISC Graduate: Orientation procedures	The School of CIS currently provides three types of "orientation" experiences with students: i) email-the interaction usually centers on descriptions of the programs of study, admission requirements, sources of financial support, and where to find more information (i.e. contact persons and web

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<p>GRAD5 GRAD6 GRAD7</p>	<p>review of initial placement of new graduate students</p>		<p>sites). A text file is sent with responses to specific inquiries.</p> <p>ii) Appointment-the interaction usually centers on descriptions of the programs of study, admission requirements, and, using the document described in 2., a preliminary assessment of prerequisites and supporting courses based upon official or unofficial transcripts. The student is provided with a preliminary plan of study for completing either the Computer Science or Information Systems program (or both).</p> <p>iii) Fall, Spring, and Summer Graduate Student Orientation sessions during Phase II registration. A formal presentation is made regarding program prerequisites, descriptions of the programs of study, admission requirements, academic misconduct policies, academic performance policies, and contact information.</p> <p>The feedback received from the discussion groups indicated no problems with i). But some concerns were given regarding the appointment and formal presentation types.</p> <p>Concern: Too much time spent on prerequisite computing and supporting courses. This is supported by student plans of study prepared for students admitted in the Fall and Spring--most satisfy the mathematics and statistics requirements and</p>

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			<p>many satisfy the six areas of required computing background. This is supported by the decline in CIS student placed in CIS 501, 503, & 507.</p> <p>Solution: The time spent on prerequisites and supporting courses was minimized in the Fall and Spring sessions. Discussion of the prerequisite is reserved for an individual's initial advising session. Prior to the orientation session, the CSC and ISC coordinators prepare, using the document described in 2., a preliminary assessment of prerequisites and supporting courses based upon official or unofficial transcripts.</p> <p>Concern: International Students do not fully understand plagiarism. This is evident from interactions with faculty colleagues who are international and from recent dismissals from the CIS graduate program.</p> <p>Solution: During the Fall and Spring Orientations, extra time was devoted to plagiarism and academic misconduct. During the Spring, three international students, who were also graduate assistants, discussed their experiences with cheating and plagiarism. More is needed.</p> <p>Concern: Students who received appointments were concerned that they did not receive an equivalent orientation.</p> <p>Solution: The set of the presentation slide handouts, which were given to students during the formal presentation, will be</p>

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			distributed to those graduate students who are oriented by appointment.
	Program: MS CIS Various sources: ISC faculty review Informal discussions with undergraduate and graduate students ISC faculty review	Graduate Program: Bulletin changes	A number of changes to the graduate section of the bulletin were made to clarify program requirements, especially for required and supporting prerequisite courses (professional component), choices of elective courses, and concentrations.