



Lander University: Unit/Program Review Report

UNIT/PROGRAM NAME	Computer Information Systems
OFFICE OF PRIMARY RESPONSIBILITY	Department of Mathematics and Computer Science
ASSESSMENT COORDINATOR	Farha Ali
SUBMISSION DATE OF THIS REPORT	May 15, 2009

I. **UNIT/PROGRAM GOAL:** Graduates will have the skills to manage Computer Information Systems problems.

Strategic Goal Supported		1. Learning		
Indicator of Success or Student Learning Outcome	1.	Students will be able to design, develop and implement a fairly complex Computer Information System in a high-level language. This includes competency in Information Systems Principles, Programming Principles, Data Organization and Management, and System Development Methodology.		
	2.			
	3.			
	4.			
	5.			
Assessment Instruments and Frequency of Assessment		Instruments	Frequency	
	1.	Major Field Test (MFT) for Computer Science (covers Programming, Discrete Structures and Algorithms, and Systems.	Annually to students in CIS-499	
	2.	Major Field Test (MFT) locally added questions	Annually to students in CIS-499	
	3.	CIS-499 Portfolio Assessment	Annually	
	4.	Successful completion of the dual degree program in Computer Engineering with Clemson University	Annually	
	5.	Internship/EYE project Evaluations	As available	
Expected Outcome of		Met (3)	Partially Met (2)	Not Met (1)

Indicator of Success or Student Learning Outcome	1.	<p>AcceptableAcceptable scores for the MFT categories are as follows</p> <ul style="list-style-type: none"> - Programming- 47% or above - Systems-16% or above - Information Management - 70% or above - Discrete Structure-26% or above - Software Engineering-47% or aboveabove - Algorithms-11% or above <p>5 or more categories including 'Programming' received acceptable scores</p>	3 or more categories including 'Programming' received acceptable scores	'Programming' category or less than 3 categories received acceptable scores.
	2.	<p>At least 70% of more all students will receive a score of 50% or higherabove.</p>	<p>At least 70% of all or more students will receive a score of 40% or abovehigher.</p>	<p>Less than 70% or more of all students will receive a score of less thanat least 40%.</p>
	3.	80% of portfolio (or all but one) evaluations for the last three years received a score of 3.5 or above from all or all but one faculty evaluators for all indicators except "self learning and research" and "understanding of moral and ethical issues" indicators	80% of portfolio (or all but one) evaluations for the last three years received a score of 3.0 or above from all or all but one faculty evaluators for all indicators except "self learning and research" and "understanding of moral and ethical issues" indicators	Criteria for 'Partially Met' not satisfied.
	4.	90% (or all but one) student completes the dual-engineering program within three years of transferring to Clemson	None	None
	5.	All students approved for internships or EYE projects received scores of 3 or higher	80% of (or all but two) students approved for internships or EYE projects received scores of 3 or	Criteria for 'Partially Met' not satisfied.

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		on all indicators of 'Employer ' and 'Faculty Mentor' evaluation forms for EYE program.	higher on all indicators of 'Employer ' and 'Faculty Mentor' evaluation forms for EYE program.			
Summary of Data Collected	1.	Spring 2008 (Mean % Correct Score) 47%	Spring 2009 Data not available cohort too small N/A			
		Spring 2008 (Mean % Correct Score) 57%	Spring 2009 Mean % Correct 70% scored 40% or higher			
	3.	Spring 2008 100%	Spring 2009 100% 100%			
		Academic Years 2002-2003 through 2007-08 No students transferred in the last five years	Academic Years 2003-2004 through 2008-09 No students transferred in the last five years			
	5.	Spring 2008 100%	Spring 2009 100%(All students scored 4 or higher)			
		Mean MFT score (135.4) for spring 2009 CIS 499 students was little lower than 2008 (139.36). The result could be attributed to the fact that the group for 2009 is comprised of students with networking emphasis. MFT Scores for individual categories were not available. Faculty will continue giving programming projects in most upper level classes to reinforce the programming concepts learned in programming classes.				
	Review of Results and Actions Taken	1.	The group was too small to get meaningful data.			
2.						

	3.	Although portfolio assessment met faculty expectations, future CIS-499 projects will be designed so they cover at least three of the standards on CIS-499 portfolio assessment rubric.	
	4.	Continue. No action required.	
	5.	Continue. No action required	
	Sum	Not enough data was available for 2009 to implement any major changes. Faculty will continue same plan of action.	
Indicator of Success or Student Learning Outcome Outcomes		Indicator of Success Evaluation	Indicator of Success Score
	1.	Not Evaluated	Not Scored
	2.	Partially Met	2
	3.	Met	3
	4.	Not Evaluated	Not Scored
	5.	Met	3
Additional Resources Required to Achieve or Sustain Results		<p>More technical assistance help for monitoring and managing labs functioning under Department of Mathematics and Computing.</p> <p>Being able to depend on Department of Mathematics and Computing should be assigned one designated person from a dedicated ITS personnel for 9 hours per week for hardware and software setup, maintenance and inventory control of networking and multiplatform labs. This will would allow CIS faculty to design and assign more complex hands-on projects without worrying about required hardware or software setup to enhance for students' experiential learning.</p>	

II. **UNIT/PROGRAM GOAL:** Graduates will have good communication skills

Strategic Goal Supported	1. Learning		
Indicator of Success or Student Learning Outcome	1.	Students will make clear and understandable oral presentations of their CIS-499 projects to an audience of varied backgrounds.	
	2.	Students will be able to write clearly and concisely.	
	3.		
	4.		
	5.		
Assessment Instruments and Frequency of Assessment		Instrument	Frequency
	1.	CIS-499 Project Walkthrough Rubric	Annually
	2.	CIS-499 Project Portfolio Assessment Rubric	Annually
	3.		
	4.		

	5.				
Expected Outcome of Indicator of Success or Student Learning Outcome		Met (3)	Partially Met (2)	Not Met (1)	
	1.	80% of (or all but two) students will be will receive an overall average rating of be rated 3.0 or higher on all communication skills indicators.	80% of (or all but two) students will be will receive an overall average rating of be rated 2.0 or higher on all communication skills indicators.	Criteria for 'Partially Met' not satisfied.	
	2.	80% of portfolios (or all but one) evaluations for last three years should have a score of 3.5 or above from all or all but one faculty evaluators for 'writing skills' indicator.	80% of portfolios (or all but one) evaluations for last three years should have a score of 3.0 or above from all or all but one faculty evaluators for 'writing skills' indicator.	Criteria for 'Partially Met' not satisfied.	
	3.				
	4.				
	5.				
Summary of Data Collected	1.	Spring 2008	Spring 2009		
		13 out of 14 (92%) students had an overall average rating of 3.0 or higher.	4 out of 5 (80%) students had an overall average rating of 3.0 or higher.		
	2.	Spring 2008	Spring 2009		
		13 3 out of 4 portfolios received score of 4 or higher from all but one faculty member. 00%	100% (There was only one portfolio and it received score of 4 or higher from all faculty members) 100%		
	3.				
4.					

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	5.					
Review of Results and Actions Taken	1.	Continue . No action Required				
	2.	Continue. No action required.				
	3.					
	4.					
	5.					
	Sum	Although expectations were met for this goal, the faculty is considering including more presentations in upper-level CIS classes. In the 2008-2009 school year, CIS 499, CIS 440, CIS 360, CIS 321, CIS 250, and CIS 240 required students to present their research/work orally and/or in writing.				
Indicator of Success or Student Learning Outcome Outcomes		Indicator of Success Evaluation		Indicator of Success Score		
	1.	Met		3		
	2.	Met		3		
	3.	Choose One		0		
	4.	Choose One		0		
	5.	Choose One		0		
Additional Resources Required to Achieve or Sustain Results	No major changes or resources required.					

III. **UNIT/PROGRAM GOAL:** Graduates will be able to learn and to research on their own.

Strategic Goal Supported	1. Learning					
Indicator of Success or Student Learning Outcome	1.	Students will be able to find and use resources for development of their CIS projects.				
	2.					
	3.					
	4.					
	5.					
Assessment Instruments and Frequency of Assessment		Instrument			Frequency	
	1.	CIS-499 Project Portfolio Assessment			Annually	
	2.					
	3.					

	4.					
	5.					
Expected Outcome of Indicator of Success or Student Learning Outcome		Met (3)	Partially Met (2)	Not Met (1)		
	1.	80% of portfolio evaluations (or all but one) for the last three years should have a score of 3.5 or above from all or all but one faculty evaluator for "self learning and research" indicator.	80% of portfolio evaluations (or all but one) for the last three years should have a score of 3.0 or above from all or all but one faculty evaluator for "self learning and research" indicator.	Criteria for "Partially Met" not staisfied satisfied .		
	2.					
	3.					
	4.					
	5.					
Summary of Data Collected	1.	Spring 2008	Spring 2009	Press F1 for Help	Press F1 for Help	Press F1 for Help
		100%(All four portfolios received scores of 4 or higher from all faculty members)	100%(100 There was only one portfolio and it received score of 4 or higher from all faculty members)%			
	2.	Press F1 for Help	Press F1 for Help	Press F1 for Help	Press F1 for Help	Press F1 for Help
		None	None	None	None	None
	3.	Press F1 for Help	Press F1 for Help	Press F1 for Help	Press F1 for Help	Press F1 for Help
		None	None	None	None	None
	4.	Press F1 for Help	Press F1 for Help	Press F1 for Help	Press F1 for Help	Press F1 for Help
None		None	None	None	None	
5.	Press F1 for Help	Press F1 for Help	Press F1 for Help	Press F1 for Help	Press F1 for Help	
	None	None	None	None	None	
Review of Results and Actions Taken	1.	Results were satisfactory this year. Faculty is considering posting information on new library acquisitions on the bulletin boards on the 1 st floor of Laura Lander Hall as a service to students .				

		No major action is required. Faculty is also considering forwarding email about new library acquisitions to all CIS major students.	
	2.	None	
	3.	None	
	4.	None	
	5.	None	
	Sum		
Indicator of Success or Student Learning Outcome Outcomes		Indicator of Success Evaluation	Indicator of Success Score
	1.	Met	3
	2.	Choose One	0
	3.	Choose One	0
	4.	Choose One	0
	5.	Choose One	0
Additional Resources Required to Achieve or Sustain Results	<p>CIS discipline should be given its own A bulletin board on the first floor of the Laura Lander Hall dedicated to CIS. This would allow CIS students to receive discipline-related information (library acquisitions, discipline news, career, graduate schools, jobs, faculty publication, etc) at the right time in a timely manner.</p> <p>A list of all current CIS major students' email addresses should be available to faculty as well.</p>		

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IV. **UNIT/PROGRAM GOAL:** Graduates will understand and practice moral and ethical duties as CIS professionals.

Strategic Goal Supported	1. Learning		
Indicator of Success or Student Learning Outcome	1.	Students will demonstrate their understanding of ACM code of ethics in CIS-499 project, where applicable.	
	2.		
	3.		
	4.		
	5.		
Assessment Instruments and Frequency of Assessment		Instrument	Frequency
	1.	CIS-499 Project Portfolio Assessment	Annually
	2.	CIS-499 team peer review	Annually
	3.	None	None
	4.	None	None

	5.	None		None			
Expected Outcome of Indicator of Success or Student Learning Outcome		Met (3)		Partially Met (2)		Not Met (1)	
	1.	80% of portfolio evaluations (or all but 2) for the last three years should have a score of 3.5 or above from all or all but one faculty evaluator for "understanding of moral and ethical issues" indicator		80% of portfolio evaluations (or all but 2) for the last three years should have a score of 3.0 or above from all or all but one faculty evaluator for "understanding of moral and ethical issues" indicator		Criteria for 'Partially Met' not satisfied.	
	2.	Zero serious violations reported					
	3.						
	4.						
	5.						
Summary of Data Collected	1.	Spring 2008	Spring 2009				
		100% (All four portfolios received score of 3.4 or higher from all but one faculty members.)	100% There was only one portfolio and it received score of 4 or higher from all faculty members.)				
	2.	Spring 2008	Spring 2009				
		0	0				
	3.						
	4.						
5.							
Review of Results and Actions Taken	1.	This is the first year to conduct CIS 499 portfolio evaluation. e, books, and online resources. Results were satisfactory. There were not enough data does not suggest any major improvements. Although results were satisfactory this year, the faculty decided that to judge this goal better. CIS 499 project portfolios will be required to include citations to all used resources including research papers.					

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		<u>open source code, books, and online resources.</u>	
	2.	<u>There were not enough dData does not</u> suggest any major improvements.	
	3.		
	4.		
	5.		
	Sum		
Indicator of Success or Student Learning Outcome Outcomes		Indicator of Success Evaluation	Indicator of Success Score
	1.	Met	3
	2.	Met	3
	3.	Choose One	0
	4.	Choose One	0
	5.	Choose One	0
Additional Resources Required to Achieve or Sustain Results		None	

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V. **UNIT/PROGRAM GOAL:** Curriculum will be updated regularly to reflect changes in CIS field

Strategic Goal Supported	5. Accountability	
Indicator of Success or Student Learning Outcome	1.	Alumni report (last not conducted in 2006)
	2.	<u>Senior written survey indicates that students were satisfied in general with their major education. CIS program was rated Good or Excellent by 4 out of 5 students. This year's group was comprised of networking students only, and they requested that there should be more network administration hands-on experience in networking curriculum. Senior Written Survey indicates...</u>
	3.	<p><u>Following issues were brought to faculty's attention by students in CIS Exit interview.</u></p> <ol style="list-style-type: none"> <u>1. Networking certification courses should be offered for credit.</u> <u>2. One contact hour should be added in some networking classes to include networking lab assignments.</u> <u>3. Network lab should be monitored and maintained better to keep hardware and software in good working order.</u> <u>4. Undecided majors should be advised that it takes four years to complete a degree in CIS because of CIS classes offering schedule and prerequisite.</u> <p><u>Students commented on the following:</u></p>

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		<ol style="list-style-type: none"> 1. <u>Networking and multiplatform labs are in better working order with new hardware.</u> 2. <u>Up-to-date software was available through MSDNAA.</u> 3. <u>Available Work experience through ITS help them gain real-world experience and confidence in IT, as well as financial support.</u> <p><u>IS Exit Interview indicates...</u></p>					
	4.	<p><u>Items discussed from the student feedback included:</u></p> <ol style="list-style-type: none"> 1. <u>Including more hands-on experiences for networking students in a one-hour lab for credit was not seen as feasible. Instructors are considering making some hands-on activities available as an extra-curricular activity, but not for academic credit.</u> 2. <u>Students, particularly networking students seem to have a misconception of their major. The fact that they are CIS majors, not Networking or Networking Administration majors needs to be reinforced periodically.</u> <p><u>Discipline Assessment Meeting...</u></p>					
	5.	CIS Strategic Advisory Meeting(<u>LastNet</u> conducted in 2007)					
Assessment Instruments and Frequency of Assessment		Instrument		Frequency			
	1.	Alumni Survey		Triennially			
	2.	Senior Written Survey		Annually			
	3.	CIS Exit Interview		Annually			
	4.	Discipline Assessment meeting		Annually			
	5.	CIS Strategic Advisory Council meeting		Biennially			
Expected Outcome of Indicator of Success or Student Learning Outcome		Met (3)		Partially Met (2)		Not Met (1)	
	1.	None		None		None	
	2.	None		None		None	
	3.	None		None		None	
	4.	None		None		None	
	5.	None		None		None	
Summary of Data Collected	1.	Press F1 for Help		Press F1 for Help		Press F1 for Help	
		None		None		None	
	2.	Press F1 for Help		Press F1 for Help		Press F1 for Help	
		None		None		None	
	3.	Press F1 for Help		Press F1 for Help		Press F1 for Help	
		None		None		None	
	4.	Press F1 for Help		Press F1 for Help		Press F1 for Help	
		None		None		None	

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		None	None	None	None	None
	5.	Press F1 for Help	Press F1 for Help	Press F1 for Help	Press F1 for Help	Press F1 for Help
		None	None	None	None	None
Review of Results and Actions Taken	1.	Items on the written questionnaire will be updated this fall as will items on the Departmental Alumni Survey to be administered in November. Students suggested more programming for Networking emphasis, more programming assignments in upper level classes, changing CIS-235 to a 300 level class and updating the Networking Lab				
	2.	None. Instructors are considering making some hands-on activities available as an extra-curricular activity, but not for academic credit. Senior written survey questionnaire will be reviewed and revised to include more multiple choice questions to obtain quantifiable results for comparison between years.				
	3.	None				
	4.	<p>None. Students are highly satisfied with advising WITHIN the major, however faculty expressed the following concerns</p> <ol style="list-style-type: none"> 1. New freshmen not declaring a major but considering CIS should be warned that taking only General Education courses in their first two years will delay their graduation. 2. Students in Bridge Programs at Technical colleges need to receive the same warning about timely program completion as new freshmen not declaring a CIS major initially. 3. Students receiving transfer credit for CIS 230 from a Technical college MUST talk with a CIS faculty member and perhaps complete an assessment to see if they have sufficient skills to be successful in CIS 231. Although the course description suggests equivalence to CIS 230, performance of students transferring in credit from some technical colleges has been problematic. It also be discussed in the fall. 				
	5.	None. Plans for a meeting of the CIS Advisory Board in Spring 2010 will also be discussed in the fall. Students encouraged to take Electronics course to enhance understanding of how computers work				
	Sum	<p>Networking Lab updated with new powerful computers and local area networks.</p> <p>Multi-platform lab renovated for ease of collaborative study and laptop use.</p> <p>Changing CIS-235 to a 300 level course is approved.</p> <p>Faculty is considering giving programming projects in all upper level classes to reinforce the programming concepts learned in programming classes taken early in the program.</p>				

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Indicator of Success or Student Learning Outcome Outcomes	Indicator of Success Evaluation		Indicator of Success Score	
	1.	Met	3	
	2.	Met	3	
	3.	Met	3	
	4.	Met	3	
5.	Not Evaluated	Not Scored		
Additional Resources Required to Achieve or Sustain Results	None			

VI. ANNUAL UNIT/PROGRAM SUMMARY

Unit/Program Goal	Strategic Goal Supported	Unit/Program Goal Outcome		Additional Resources Required to Achieve or Sustain Results
		Score	Evaluation Met: 3.00 – 2.01 Partially Met: 2.00 – 1.01 Not Met: 1.00 – 0.01 Not Evaluated: 0.00	
1. Graduates will have the skills to manage Computer Information Systems problems	1. Learning	2.66	Met	\$0.00
2. Graduates will have good communication skills	1. Learning	3.00	Met	\$0.00
3. Graduates will be able to learn and research on their own	1. Learning	3.00	Met	\$0.00
4. Graduates will understand and practice moral and ethical duties as CIS professionals	1. Learning	3.00	Met	\$0.00
5. Curriculum will be updated regularly to reflect changes in CIS field	5. Accountability	3.00	Met	\$0.00
6.	Choose One	0.00	Choose One	\$0.00
7.	Choose One	0.00	Choose One	\$0.00
8.	Choose One	0.00	Choose One	\$0.00
9.	Choose One	0.00	Choose One	\$0.00
10.	Choose One	0.00	Choose One	\$0.00
UNIT/PROGRAM TOTALS		3.00	Met	\$0.00

