

**Assurance of Student Learning
2018-2019**

Ogden College of Science and Engineering

School of Engineering and Applied Sciences

Computer Science 629

Use this page to list learning outcomes, measurements, and summarize results for your program. Detailed information must be completed in the subsequent pages.

Student Learning Outcome 1: An ability to apply knowledge of computing and mathematics appropriate to WKU's computer science program

Instrument 1	CS 325 Homework
Instrument 2	
Instrument 3	

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.	Met	Not Met
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Student Learning Outcome 2: An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.

Instrument 1	CS 351 Project: Online Shopping Store
Instrument 2	
Instrument 3	

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.	Met	Not Met
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Student Learning Outcome 3: An ability to function effectively on teams to accomplish a common goal

Instrument 1	Assess ability of the team (working on the senior project) to work well together as a team.
Instrument 2	Assess ability of team (working on the senior project) to set goals.
Instrument 3	Ability of the team (working on the senior project) to manage the project including managing risk, and create final deliverables

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.	Met	Not Met
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Program Summary (Briefly summarize the action and follow up items from your detailed responses on subsequent pages.)

CS program successfully completed the ABET accreditation process in 2018-2019 and was accredited in August 2019. The assessment results indicate that our program is well aligned with learning outcomes. (Note: Due to the accreditation visit and the associated work, no assessment data was collected in Fall 2018. The first two learning outcomes have more instruments but no data is available. A very detailed description of the 2017/2018 assessment data can be made available upon request.)

Student Learning Outcome 1

Student Learning Outcome	An ability to apply knowledge of computing and mathematics appropriate to WKU's computer science program		
Measurement Instrument 1	<p><u>Homework 4, Question 5(a) Cache Memory Performance:</u> Write a program that compares the performance of data access located in L1 cache and RAM. Assume the L1 access time is 10ns and the RAM access time is 100ns. Your program should begin by assuming all data is accessed from L1 cache. The program should iterate through all possibilities of L1 cache hits and misses (accessing RAM). For example, the first iteration should be 100% access from L1 cache multiplied by 10ns, no RAM access. The second iteration should be 99% access from L1 cache multiplied by 10ns, and 1% access from RAM multiplied by 100ns. The third iteration should be 98% access from L1 cache multiplied by 10ns, and 2% access from RAM multiplied by 100ns, etc. Your program should end at 0% access from L1 cache and 100% access from RAM. Write the data out to a log file and graph the results using programs like Excel, gnuplot, or R.</p>		
Criteria for Student Success	The work was evaluated to Novice (Does not know how to calculate average access time), Intermediate (Some correct steps in calculation, but incorrect solution), Proficient (Correct solution)		
Program Success Target for this Measurement	70% of student score at proficient level	Percent of Program Achieving Target	70%
Methods	The instructor for CS 325 assessed 17 students' work, 12 students scored at the proficient level.		
Measurement Instrument 2			
Criteria for Student Success			
Program Success Target for this Measurement		Percent of Program Achieving Target	
Methods			
Measurement Instrument 3			
Criteria for Student Success			
Program Success Target for this Measurement		Percent of Program Achieving Target	
Methods			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.			Met
Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)			Not Met
No changes needed – however due to changes in the accreditation guidelines, this student outcome will be replaced with a more general one.			
Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)			
Continue the assessment			

Student Learning Outcome 2

Student Learning Outcome	An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.		
Measurement Instrument 1	Online shopping store project: Students are required to 1) test database functions using SQL. 2) discuss strengths of the designed databases and analyze the problems of the designed databases.		
Criteria for Student Success	The work was evaluated to Novice (No collection or no analysis), Intermediate(Collect data but few analysis), Proficient (Collect data and sufficient analysis with reasonable conclusions or observations)		
Program Success Target for this Measurement	70% of students score at proficient level.	Percent of Program Achieving Target	80.9%
Methods	The instructor for CS 351 assessed 21 students' project, 17 out 21 performed at the proficient level.		
Measurement Instrument 2			
Criteria for Student Success			
Program Success Target for this Measurement		Percent of Program Achieving Target	
Methods			
Measurement Instrument 3			
Criteria for Student Success			
Program Success Target for this Measurement		Percent of Program Achieving Target	
Methods			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.			Met
Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)			Not Met
No changes needed			
Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)			
Continue the assessment			

Student Learning Outcome 3

Student Learning Outcome	An ability to function effectively on teams to accomplish a common goal		
Measurement Instrument 1	Assess ability of the team (working on the senior project) to work well together as a team. Team survey and weekly discussions with instructors		
Criteria for Student Success	The work was evaluated to Novice (Team did not collaborate well), Intermediate (Team collaborated well with only a few occurrences of communication breakdowns), Proficient (Team collaborated well)		
Program Success Target for this Measurement	70% of students score at proficient level	Percent of Program Achieving Target	95%
Methods	The instructor for CS 496 assessed 20 students' work, 19 out of 20 passed (Intermediate or proficient).		
Measurement Instrument 2	Assess ability of team (working on the senior project) to set goals.		
Criteria for Student Success	The work was evaluated to Novice (Goals for the project is inappropriate for the level of the course. Low level of clarity in system requirements document), Intermediate (Goals for the project is appropriate for the level of the course. Low level of clarity in system requirements document), Proficient (Goals for the project is appropriate for the level of the course. Acceptable documentation for system requirements)		
Program Success Target for this Measurement	70% of teams score at proficient level	Percent of Program Achieving Target	100%
Methods	The instructor for CS 496 assessed the team's ability to set goals for all 6 teams; all passed (proficient).		
Measurement Instrument 3	Ability of the team (working on the senior project) to manage the project including managing risk, and create final deliverables		
Criteria for Student Success	The work was evaluated to Novice (The final deliverable does not satisfy most of the requirements. Poor documentation.), Intermediate (The final deliverable does not satisfy some major requirements. Major components are missing in the final documentation.), Proficient (The final deliverable satisfied most of the requirements. Presents all required items at the acceptable level of quality)		
Program Success Target for this Measurement	70% of teams score at proficient level	Percent of Program Achieving Target	80%
Methods	The instructor for CS 496 assessed the team's ability to manage the projects, the risks, and create required deliverables for 6 teams; 5 teams passed at the proficient level.		
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.			Met
Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)			
No changes needed			
Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)			
Continue the assessment			