

Outcome CS-j. Be familiar with advanced concepts of some specialized computer science areas.

The assessment is performed with respect to the key abilities that the students are expected to acquire in specific courses that have been identified with respect to this outcome.

Course	Performance indicators
Theory of Computing	One of CS 420, CS 422, CS 426, or Great Ideas in Theoretical CS.
Software and Knowledge engineering	One of CS 430, CS 440, CS 470, CS 472, CS 475, Human Computer Interaction
Computer systems	One of CS 453, CS, 465, CPE 435, Functional Programming
CS 4xx	One course from any of the above

Tools used: Embedded Course assessments

Data Collection: Embedded Course Assessments, Student Grades, Student Advisory Feedback.

Frequency of data collection: The data are collected every time courses are taught.

Data Analysis: Every course evaluated by embedded assessments every 4th offering if offered twice an academic year, 3rd offering if offered once an academic year and every other offering if offered less than every academic year.

Closing the loop: This outcome is subject to review every year based on performance criteria and metrics and specific action items are developed, if necessary, to revise the content of the courses. The analyzed data are presented to the CS curriculum committee which considers the results.

Performance criteria and metrics:

- a) Embedded Course assessments for CS 420, 422, 426, 430, 440, 453, 465, 470, 472 with average grades \geq C on assignments and test which cover the performance indicators.

Assessment Tool:

**Undergraduate In-Course
Program Outcomes Assessment Form**

**Lane Department of Computer Science and Electrical Engineering
Undergraduate In-Course Program Outcomes Assessment Form**

Course: _____ Semester: _____ Instructor: _____

Assessment of student preparedness for this course at the start of this term:

At the beginning of this term:	Nearly 100%	About 75%	About 50%	About 25%	N/A
1. Students had the prerequisite math skills.					
2. Students had the prerequisite laboratory skills.					
3. Students had the prerequisite problem solving skills.					
4. Students had the prerequisite design skills					
5. Students were capable of using the necessary tools (e.g. hardware/software, etc.)					
6. Students had the necessary programming skills.					
7. Students had the necessary communication skills.					

Course Learning Outcomes * (assessed within course)	How/Where Assessed**	Student Scores			
		Min Pass %	High Score %	Class Avg %	Grade ***
1.					
2.					
3.					
4.					

* Indicate which program outcome each course outcome maps into.

** For example “exam 1, problem 1”

*** For **Grade** give the class average on an “A=4.0, B=3.0” basis.

Recommendations: Include which outcomes require more attention within the course to improve student performance, and how the course should be altered in the future to improve results.
