



**ANNUAL PROGRAM REPORT**

**I. SELF-STUDY** *(suggested length of 1-3 pages)*

College	College of Science
Department	Computer Science
Program	Bachelor's Computer Science Options: software engineering, networking
Reporting for Academic Year	2016-2017
Last 5-Year Review	2010-2011
Next 5-Year Review	2021-2022
Department Chair	Dr. Matt Johnson
Date Submitted	7/5/2017

**II. SUMMARY OF ASSESSMENT** *(suggested length of 1-2 pages)*

**A. Program Learning Outcomes (PLO)**

List all your PLO in this box. Indicate for each PLO its alignment with one or more institutional learning outcomes (ILO). For example: "PLO 1. Apply advanced computer science theory to computation problems (ILO 2 & 6)."

Students graduating with a Bachelor of Science in Computer Science will be able to:

1. apply knowledge of mathematics and computational theory to appropriate problems in computer science (ILO 2 & 6)
2. analyze a problem, and identify and define the resources and requirements needed for its solution (ILO 1)
3. design and implement a program to meet stated needs (ILO 6)
4. develop and maintain computer-based systems, processes, and platforms (ILO 1 & 6)
5. recognize and distinguish the mechanisms, components and architecture of computing systems (ILO1 & 6)
6. employ current techniques, skills, and tools necessary for computing practice (ILO 1 & 2)
7. identify professional, ethical, legal, and security issues and responsibilities and the impact of computing on individuals, organizations, and society (ILO5)
8. perform successfully on teams to accomplish a common goal, and communicate effectively in written and oral form (ILO 4)

## B. Program Learning Outcome(S) Assessed

List the PLO(s) assessed. Provide a brief background on your program's history of assessing the PLO(s) (e.g., annually, first time, part of other assessments, etc.)

We have evaluated PLO's 1,2, and 3 in the past three years. This year we evaluate PLO 4.

## C. Summary of Assessment Process

Summarize your assessment process briefly using the following sub-headings.

**Instrument(s):** (include if new or old instrument, how developed, description of content)

Blackboard Assessment Quizzes – questions with multiple choice answers

### Sampling Procedure:

All students in the assessed course complete an assessment quiz at the end of the quarter

### Sample Characteristics:

Percentage of correct/incorrect answers for each assessment question.

**Data Collection:** (include when, who, and how collected)

Instructor gathers results from their Blackboard course shell and sends them to the undergraduate assessment coordinator, Leann Christianson

### Data Analysis:

Assessment coordinator compiles the results in tabular form.

## D. Summary of Assessment Results

Summarize your assessment results briefly using the following sub-headings.

This year we are assessing PLO 4: develop and maintain computer-based systems, processes, and platforms (ILO 1 & 6)

This PLO was assessed in CS 4590 Computer Networks, CS 4560 Operating Systems, and CS 4525, Computer Security.

### Main Findings:

**CS 4590 Computer Networks – 2 sections - Only questions 3,4, 7 addressed PLO 4**

Q3 88%, 75%,

Q4 44% 45%,

Q7 100%, 90%

## **CS 4525 - Network Security**

100% all questions

## **CS 4596**

Q8 54%

Q9 54%

### **Recommendations for Program Improvement:** *(changes in course content, course sequence, student advising)*

Course content will be somewhat adjusted under semester conversion, however, we are not seeing content as an issue in these courses. In general, we are happy with the results, but realize there is a need for more courses to be assessed.

We have noticed that many students take courses out of sequence which hinders their success in moving forwards through their degree work. With the appointment of Dr. Christianson as undergraduate advisor, we have been reaching out to students for major advising with positive responses from students. In particular we are targeting students with lower GPA's.

### **Next Step(s) for Closing the Loop:** *(recommendations to address findings, how & when)*

For changes made to close the loop, new PLO's have been created for semester conversion. At this time we are creating standardized assessment quizzes for all required courses. Each quiz will address a single PLO.

### **Other Reflections:**

Currently, we do not have standardized assessments so consistency and validation is an issue. In addition, lecturers are not always aware of the assessments and do not give them. We have created a standard repository for the assessment quizzes for easier deployment in the future.

### **E. Assessment Plans for Next Year**

*Summarize your assessment plans for the next year, including the PLO(s) you plan to assess, any revisions to the program assessment plan presented in your last five-year plan self-study, and any other relevant information.*

Next year we will assess PLO 5. No changes will be made as the entire process is being revamped for Fall 2018-19.