

## Computer Science [CSCI]

**Cycles included in this report:**

Jun 1, 2018 to May 31, 2019

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## **Program Name: Computer Science [CSCI]**

**Reporting Cycle: Jun 1, 2018 to May 31, 2019**

### **1 Is this program offered via Distance Learning?**

100% Traditional or less than 50% Distance/Traditional

### **2 Is this program offered at an off-site location?**

No

### **2.1 If yes to previous, provide addresses for each location where 50% or more of program credits may be earned.**

### **3 Example of Program Improvement**

2016-2017:

Data from last year indicates some improvements were observed. Analysis has suggested minor improvements to teaching methods were needed in certain classes (CSCI 491, CSCI 413, and CSCI 416 in particular) but insufficient data has been collected so far.

2017-2018:

Continued improvements have been observed in the majority of our benchmarks, with all assessment metrics making the benchmark.

2018-2019:

Updated the Degree plans for all three concentration to meet the new ABET requirements. Updated two Computer Labs with new PCs and Software packages.

### **4 Program Highlights from the Reporting Year**

2016-2017:

The faculty of the B.S. in Computer Science program reviewed CS courses in the McNeese Catalog and eliminated unused courses and reviewed/updated course descriptions, and prerequisites for all courses as needed. The SLO assessments (ABET 3a-k) for the designated courses (CSCI 308, 410, 413, 416, and 491) were done.

2017-2018:

The faculty roster has gone through change due to retirements and attrition. In spite of this, benchmarks have been met and exceeded. Continued improvement will include re-evaluation of courses and introduction of new courses.

2018-2019:

In Fall 2018 the ABET evaluators visited McNeese and reviewed the CS program. There were no academic concerns or weakness. However, there were some weaknesses about Institutional support and outdated Lab facilities. Both issues were addressed in Spring 2019 and the final result were complete success and the CS program was accredited for a full six-year term. This was a great learning process for faculty and staff.

### **5 Program Mission**

Provide students with a solid grounding in computer science, enable students to become effective problem solvers, foster the students' ability to effectively convey their technical knowledge and encourage students to become responsible computer science professionals. The degree will prepare students for a career in the field of computer science or for admission into a graduate program in computer science or a related field of study. Stakeholders: graduate schools, employers.

### **6 Institutional Mission Reference**

This degree supports the University's fundamental mission to successfully educate undergraduate students to meet the needs of regional employers. The program provides graduates with the critical thinking and problem solving skills required to support regional economic development. It

provides opportunities for student internships in local industry and prepares students to become effective employees.

## 7 Assessment and Benchmark CSCI 308 Coursework [Approved]

Assessment: The rubric evaluation of CSCI 308 - Advanced Data Structures and Algorithms assesses the following Performance Criteria about ABET SLO A.

Students should have an ability to apply knowledge of computing and mathematics appropriate to the discipline (ABET SLO A).

1. Apply mathematics to obtain the general formula for the sum of a sequence of terms, seen in the student's ability to perform a proof by induction.
2. Apply knowledge of computing and mathematics to develop recursive and non-recursive solutions to a broad variety of problems.
3. Apply the necessary math to derive and/or explain the best case, worst case, and average case complexities of certain important problems in Computer Science.

Benchmark: An average score of 3.00/5.00 is the desired achievement level. A benchmark of 3.00 on a 5-point scale for the rubric evaluation of "CSCI 308 - Advanced Data Structures and Algorithms" for each of the SLOs is set.

Prior to 2016-2017, the benchmark was 2.00 on a 3-point scale.

Files: See list of attachments to view. (Requires Adobe Reader or compatible viewer).

3a

### Course Links

#### CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]

#### Outcome Links

##### 3A-PC1 [Program]

Apply mathematics to obtain the general formula for the sum of a sequence of terms, seen in the student's ability to perform a proof by induction

##### 3A-PC2 [Program]

Apply knowledge of computing and mathematics to develop recursive and non-recursive solutions to a broad variety of problems

##### 3A-PC3 [Program]

Apply the necessary math to derive and/or explain the best case, worst case, and average case complexities of certain important problems in Computer Science

##### ABET CAC [External]

###### ABET CAC 3A

An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline

### 7.1 Data [Approved]

PC1: Apply mathematics to obtain the general formula for the sum of a sequence of terms, seen in the student's ability to perform a proof by induction.

Academic Year	Average score on PC1
2013-2014	2.50/3.00
2014-2015	2.19/3.00
2015-2016	1.76/3.00
2016-2017	3.92/5.00
2017-2018	4.25/5.00
2018-2019	4.49/5.00

**Course Links****CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]****Outcome Links****3A-PC1 [Program]**

Apply mathematics to obtain the general formula for the sum of a sequence of terms, seen in the student's ability to perform a proof by induction

**7.1.1 Analysis of Data and Plan for Continuous Improvement [Approved]**

2016-2017:

Assessment scale for 2016-2017 is changed to a 5-point scale. The benchmark was met in 2016-2017. No action is needed. The data collected will be monitored for possible benchmark change.

2017-2018:

Continuing on the 5-point scale, the benchmark was met and an improvement from the previous year was seen. No action is needed.

2018-2019:

The benchmark was met in 2018-2019 with an improvement seen from the previous year. No action is needed. The new BM is 3.25/5.00. The data collected will be monitored for possible benchmark change.

**Course Links****CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]****7.2 Data**

PC2: Apply knowledge of computing and mathematics to develop recursive and non-recursive solutions to a broad variety of problems.

Academic Year	Average score on PC2
2013-2014	2.36/3.00
2014-2015	2.50/3.00
2015-2016	2.54/3.00
2016-2017	4.12/5.00
2017-2018	4.41/5.00
2018-2019	4.48/5.00

**Course Links****CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]****Outcome Links****3A-PC2 [Program]**

Apply knowledge of computing and mathematics to develop recursive and non-recursive solutions to a broad variety of problems

**7.2.1 Analysis of Data and Plan for Continuous Improvement**

2016-2017:

Assessment scale for 2016-2017 is changed to a 5-point scale. The benchmark was met in 2016-2017. No action is needed. The data collected will be monitored for possible benchmark change.

2017-2018:

The benchmark was met in 2017-2018 with an improvement seen from the previous year. No

action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

The benchmark was met in 2018-2019 with an improvement seen from the previous year. No action is needed. The new BM is changed to 3.25/5.00. The data collected will be monitored for possible benchmark change.

#### Course Links

**CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]**

### 7.3 Data

PC3: Apply the necessary math to derive and/or explain the best case, worst case, and average case complexities of certain important problems in Computer Science.

Academic Year	Average score on PC3
2013-2014	2.63/3.00
2014-2015	2.55/3.00
2015-2016	2.71/3.00
2016-2017	3.96/5.00
2017-2018	4.63/5.00
2018-2019	4.86/5.00

#### Course Links

**CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]**

#### Outcome Links

##### 3A-PC3 [Program]

Apply the necessary math to derive and/or explain the best case, worst case, and average case complexities of certain important problems in Computer Science

### 7.3.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Assessment scale for 2016-2017 is changed to a 5-point scale. The benchmark was met in 2016-2017. No action is needed. The data will be monitored for possible benchmark change.

2017-2018:

The benchmark was met in 2017-2018 and an improvement over the previous year shown. No action is needed. The data will be monitored for possible benchmark change.

2018-2019:

The benchmark was met in 2018-2019 with an improvement seen from the previous year. No action is needed. The new BM is changed to 3.25/5.00. The data collected will be monitored for possible benchmark change.

#### Course Links

**CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]**

### 8 Assessment and Benchmark CSCI 308 Coursework [Approved]

Assessment: The rubric evaluation of CSCI 308 - Advanced Data Structures and Algorithms assesses the following Performance Criteria about ABET SLO B.

Students should have an ability to analyze a problem, and identify and define the computing requirements appropriate to its solution (ABET SLO B).

1. Demonstrate knowledge of sorting - one of the most studied problems in

- Computer Science - and identify computing requirements appropriate to its solution - array versus tree solutions, and recursive versus iterative solutions.
- Analyze various problems in Computer Science and define and specify the computing requirements for its solution using the big-Oh Notation, such as  $O(n)$ ,  $O(n \log n)$ ,  $O(n^2)$ ,  $O(n^3)$ ,  $O(2n)$ , etc.

Benchmark: An average score of 3.00/5.00 is the desired achievement level. A benchmark of 3.00 on a 5-point scale for the rubric evaluation of "CSCI 308 - Advanced Data Structures and Algorithms" for each of the SLOs is set.

Prior to 2016-2017, the benchmark was 2.00 on a 3-point scale.

Files: See list of attachments to view. (Requires Adobe Reader or compatible viewer).

3b

### Course Links

#### CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]

#### Outcome Links

##### 3B-PC1 [Program]

Demonstrate knowledge of sorting - one of the most studied problems in Computer Science - and identify computing requirements appropriate to its solution- array versus tree solutions, and recursive versus iterative solutions

##### 3B-PC2 [Program]

Analyze various problems in Computer Science and define and specify the computing requirements for its solution using the big-Oh Notation, such as  $O(n)$ ,  $O(n \log n)$ ,  $O(n^2)$ ,  $O(n^3)$ ,  $O(2n)$ , etc.

##### ABET CAC [External]

##### ABET CAC 3B

An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution

## 8.1 Data

PC1: Demonstrate knowledge of sorting - one of the most studied problems in Computer Science - and identify computing requirements appropriate to its solution - array versus tree solutions, and recursive versus iterative solutions.

Academic Year	Average score on PC1
2013-2014	2.54/3.00
2014-2015	2.64/3.00
2015-2016	2.43/3.00
2016-2017	3.96/5.00
2017-2018	4.69/5.00
2018-2019	3.66/5.00

### Course Links

#### CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]

#### Outcome Links

##### 3B-PC1 [Program]

Demonstrate knowledge of sorting - one of the most studied problems in Computer Science - and identify computing requirements appropriate to its solution- array versus tree solutions, and recursive versus iterative solutions

### 8.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Assessment scale for 2016-2017 is changed to a 5-point scale. The benchmark was met in 2016-2017. No action is needed. The data collected will be monitored for possible benchmark change.

2017-2018:

The benchmark was met in 2017-2018 with improvement from the previous year seen. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

The benchmark was met in 2018-2019 with an improvement seen from the previous year. No action is needed. The new Average BM (8.1 & 8.2) is changed to 3.50/5.00. The data collected will be monitored for possible benchmark change.

#### Course Links

**CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]**

### 8.2 Data [Approved]

PC2: Analyze various problems in Computer Science and define and specify the computing requirements for its solution using the big-Oh Notation, such as  $O(n)$ ,  $O(n \log n)$ ,  $O(n^2)$ ,  $O(n^3)$ ,  $O(2n)$ , etc.

Academic Year	Average score on PC2
2013-2014	2.68/3.00
2014-2015	2.73/3.00
2015-2016	2.48/3.00
2016-2017	4.46/5.00
2017-2018	4.84/5.00
2018-2019	4.38/5.00

#### Course Links

**CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]**

#### Outcome Links

##### 3B-PC2 [Program]

Analyze various problems in Computer Science and define and specify the computing requirements for its solution using the big-Oh Notation, such as  $O(n)$ ,  $O(n \log n)$ ,  $O(n^2)$ ,  $O(n^3)$ ,  $O(2n)$ , etc.

### 8.2.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Assessment scale for 2016-2017 is changed to a 5-point scale. The benchmark was met in 2016-2017. No action is needed. The data collected will be monitored for possible benchmark change.

2017-2018:

The benchmark was met in 2017-2018 with improvement from the previous year seen. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

The benchmark was met in 2018-2019 with an improvement seen from the previous year. No action is needed. The new Average BM (8.1 & 8.2) is changed to 3.50/5.00. The data collected will be monitored for possible benchmark change.

#### Course Links

**CSCI308 [Advanced Data Structures and Algorithms (Lec. 2, Lab. 2, Cr. 3)]**

## 9 Assessment and Benchmark CSCI 410 and 413 Coursework [Approved]

Assessment: The rubric evaluation of CSCI 410 - Software Engineering I and CSCI 413 - Software Engineering II assesses the following Performance Criteria about ABET SLO E.

Students should have an understanding of professional, ethical, legal, security and social issues and responsibilities (ABET SLO E).

1. Identify ethical codes or standards commonly accepted in the computer science profession.
2. Identify specific social/ethical/legal issues relevant to the computing profession and evaluate appropriate and inappropriate responses to hypothetical instances of those issues.

Benchmark for PC1: An average score of 3.00/5.00 is the desired achievement level. A benchmark of 3.00 on a 5-point scale for the rubric evaluation of "CSCI 410 - Software Engineering I and CSCI 413 - Software Engineering II".

Benchmark for PC2: An average score of 3.50/5.00 is the desired achievement level. A benchmark of 3.50 on a 5-point scale for the rubric evaluation of "CSCI 410 - Software Engineering I and CSCI 413 - Software Engineering II".

Prior to 2017-2018, the benchmark was 3 on a 5-point scale.

Prior to 2016-2017, the benchmark was 2 on a 3-point scale.

*Files: See list of attachments to view. (Requires Adobe Reader or compatible viewer).*

3e

### Course Links

**CSCI410 [Software Engineering I (Lec. 3, Cr. 3)]**

**CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]**

### Outcome Links

#### 3E-PC1 [Program]

Identify ethical codes or standards commonly accepted in the computer science profession.

#### 3E-PC2 [Program]

Identify specific social/ethical/legal issues relevant to the computing profession and evaluate appropriate and inappropriate responses to hypothetical instances of those issues.

#### ABET CAC [External]

##### ABET CAC 3E

An understanding of professional, ethical, legal, security and social issues and responsibilities

## 9.1 Data [Approved]

PC1: Identify ethical codes or standards commonly accepted in the computer science profession.

Academic Year	Average score on PC1
2013-2014	2.75/3.00
2014-2015	2.38/3.00
2015-2016	2.88/3.00
2016-2017	—
2017-2018	3.73/5.00
2018-2019	4.3/5.00

### Course Links

**CSCI410 [Software Engineering I (Lec. 3, Cr. 3)]**

**CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]**



### Outcome Links

#### 3E-PC1 [Program]

Identify ethical codes or standards commonly accepted in the computer science profession.

#### 9.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

For 2016-2017 the rubric has changed and data was not collected. Using the new rubric, data for PC1 will be collected in the 2017-2018 cycle.

2017-2018:

The benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

The benchmark was met in 2018-2019 with an improvement seen from the previous year. No action is needed. The new Average BM for 9.1 is changed to 3.25/5.00. The data collected will be monitored for possible benchmark change.

### Course Links

**CSCI410 [Software Engineering I (Lec. 3, Cr. 3)]**

**CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]**

#### 9.2 Data [Approved]

PC2: Identify specific social/ethical/legal issues relevant to the computing profession and evaluate appropriate and inappropriate responses to hypothetical instances of those issues.

Academic Year	Average score on PC2
2013-2014	2.80/3.00
2014-2015	2.40/3.00
2015-2016	2.76/3.00
2016-2017	4.83/5.00
2017-2018	3.39/5.00
2018-2019	4.04/5.00

### Course Links

**CSCI410 [Software Engineering I (Lec. 3, Cr. 3)]**

**CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]**

### Outcome Links

#### 3E-PC2 [Program]

Identify specific social/ethical/legal issues relevant to the computing profession and evaluate appropriate and inappropriate responses to hypothetical instances of those issues.

#### 9.2.1 Analysis of Data and Plan for Continuous Improvement [Approved]

2016-2017:

The results shows that students demonstrated an understanding of ethical, legal, and social issues and responsibilities. The benchmark will be raised in 2017-2018 to 3.50 on a 5-point scale.

2017-2018:

The benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

The benchmark was met in 2018-2019 with an improvement seen from the previous year. No action is needed. The new Average BM (9.1 & 9.2) is changed to 3.50/5.00. The data collected will be monitored for possible benchmark change.

#### Course Links

**CSCI410 [Software Engineering I (Lec. 3, Cr. 3)]**

**CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]**

### 10 Assessment and Benchmark CSCI 413 Coursework [Approved]

Assessment: The rubric evaluation of CSCI 413 - Software Engineering II assesses the following Performance Criteria about ABET SLO D.

Students should demonstrate an ability to function effectively on teams to accomplish a common goal (ABET SLO D).

1. Contribute to team objectives through active participation in team activities.
2. Contribute to team objectives through performance of individual assigned tasks.
3. Contribute to team objectives through productive interdisciplinary activities.

Benchmark: An average score of 3.00/5.00 is the desired achievement level. A benchmark of 3.00 on a 5-point scale for the rubric evaluation of "CSCI 413 - Software Engineering II".

Prior to 2016-2017, the benchmark was 2.20 on a 3-point scale.

Files: See list of attachments to view. (Requires Adobe Reader or compatible viewer).

3d

#### Course Links

**CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]**

#### Outcome Links

##### 3D-PC1 [Program]

Contribute to team objectives through active participation in team activities

##### 3D-PC2 [Program]

Contribute to team objectives through performance of individual assigned tasks

##### 3D-PC3 [Program]

Contribute to team objectives through productive interdisciplinary activities.

##### ABET CAC [External]

##### ABET CAC 3D

An ability to function effectively on teams to accomplish a common goal

### 10.1 Data [Approved]

PC1: Contribute to team objectives through active participation in team activities.

Academic Year	Average score on PC1
2013-2014	2.25/3.00
2014-2015	2.43/3.00
2015-2016	2.73/3.00
2016-2017	3.69/5.00
2017-2018	3.82/5.00
2018-2019	4.75/5.00

#### Course Links

**CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]****Outcome Links****3D-PC1 [Program]**

Contribute to team objectives through active participation in team activities

**10.1.1 Analysis of Data and Plan for Continuous Improvement [Approved]**

2016-2017:

Students are adequately prepared to contribute to team objectives through active participation in team activities. Data shows steady improvements to this PC over the last three years. The benchmark will be monitored for possible change.

2017-2018:

The benchmark was met in 2017-2018 with improvement from the previous year. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

The benchmark was met in 2018-2019 with an improvement seen from the previous year. No action is needed. The new Average BM (10.1, 10.2, & 10.3) is changed to 3.25/5.00. The data collected will be monitored for possible benchmark change.

**Course Links****CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]****10.2 Data [Approved]**

PC2: Contribute to team objectives through performance of individual assigned tasks.

Academic Year	Average score on PC2
2013-2014	2.25/3.00
2014-2015	2.30/3.00
2015-2016	2.85/3.00
2016-2017	4.06/5.00
2017-2018	3.75/5.00
2018-2019	4.60/5.00

**Course Links****CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]****Outcome Links****3D-PC2 [Program]**

Contribute to team objectives through performance of individual assigned tasks

**10.2.1 Analysis of Data and Plan for Continuous Improvement**

2016-2017:

Students are adequately prepared to contribute to team objectives through performance of individual assigned tasks. For 2017-2018 the benchmark will be reviewed for adjustments.

2017-2018:

The benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

The benchmark was met in 2018-2019 with an improvement seen from the previous year. No action is needed. The new Average BM (10.1, 10.2, & 10.3) is changed to 3.25/5.00. The

data collected will be monitored for possible benchmark change.

#### Course Links

#### CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]

### 10.3 Data [Approved]

PC3: Contribute to team objectives through productive interdisciplinary activities.

Academic Year	Average score on PC3
2013-2014	2.00/3.00
2014-2015	2.19/3.00
2015-2016	2.78/3.00
2016-2017	—
2017-2018	3.75/5.00
2018-2019	4.38/5.00

#### Course Links

#### CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]

#### Outcome Links

#### 3D-PC3 [Program]

Contribute to team objectives through productive interdisciplinary activities.

### 10.3.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

For 2016-2017 the rubric has changed as data was not collected. Using the new rubric, data for PC3 will be collected in the 2017-2018 cycle.

2017-2018:

The benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

The benchmark was met in 2018-2019 with an improvement seen from the previous year. No action is needed. The new Average BM (10.1, 10.2, & 10.3) is changed to 3.25/5.00. The data collected will be monitored for possible benchmark change.

#### Course Links

#### CSCI413 [Software Engineering II (Lec. 3, Cr. 3)]

## 11 Assessment and Benchmark CSCI 491 Coursework [Approved]

Assessment: The rubric evaluation of CSCI 491 - Seminar assesses the following Performance Criteria about ABET SLO G.

Students should have an ability to analyze the local and global impact of computing on individuals, organizations, and society (ABET SLO G).

1. Identify and orally discuss an international diversity component in the computing field.
2. Identify and orally discuss expert opinion/statistical analysis/evidence impacting the computing field.

Benchmark for PC1: An average of 3.30/5.00 is the desired achievement level. A benchmark of 3.30 on a 5-point scale for the rubric evaluation of "CSCI 491 - Seminar" for each of the SLOs is set.

Prior to 2017-2018, the benchmark was 3.00 on a 5-point scale.  
 Prior to 2016-2017, the benchmark was 2.00 on a 3-point scale.

Benchmark for PC2: An average of 3.00/5.00 is the desired achievement level. A benchmark of 3.00 on a 5-point scale for the rubric evaluation of "CSCI 491 - Seminar" for each of the SLOs is set.

Prior to 2016-2017, the benchmark was 2.00 on a 3-point scale.

*Files: See list of attachments to view. (Requires Adobe Reader or compatible viewer).*

3g

#### Course Links

#### **CSCI491 [Seminar (Cr. 3)]**

#### Outcome Links

##### **3G-PC1 [Program]**

Identify and orally discuss an international diversity component in the computing field.

##### **3G-PC2 [Program]**

Identify and orally discuss expert opinion/statistical analysis/evidence impacting the computing field.

##### **ABET CAC [External]**

##### **ABET CAC 3G**

An ability to analyze the local and global impact of computing on individuals, organizations, and society

### **11.1 Data [Approved]**

PC1: Identify and orally discuss an international diversity component in the computing field.

Academic Year	Average score on PC1
2013-2014	2.89/3.00
2014-2015	2.89/3.00
2015-2016	3.00/3.00
2016-2017	4.50/5.00
2017-2018	3.85/5.00
2018-2019	3.40/5.00

#### Course Links

#### **CSCI491 [Seminar (Cr. 3)]**

#### Outcome Links

##### **3G-PC1 [Program]**

Identify and orally discuss an international diversity component in the computing field.

### **11.1.1 Analysis of Data and Plan for Continuous Improvement**

2016-2017:

The result shows that students demonstrated an ability to analyze the local and global impact of computing on individuals, organizations, and society. Students have provided excellent oral presentations on International Diversity component. The benchmark will be raised in 2017-2018 to 3.30 on a 5-point scale.

2017-2018:

The raised benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

The new benchmark was met in 2018-2019. No action is needed. The data collected will be monitored for possible benchmark change.

**Course Links**

**CSCI491 [Seminar (Cr. 3)]**

**11.2 Data [Approved]**

PC2: Identify and orally discuss expert opinion/statistical analysis/evidence impacting the computing field.

Academic Year	Average score on PC2
2013-2014	2.17/3.00
2014-2015	2.17/3.00
2015-2016	2.30/3.00
2016-2017	2.86/5.00
2017-2018	3.65/5.00
2018-2019	3.89/5.00

**Course Links**

**CSCI491 [Seminar (Cr. 3)]**

**Outcome Links**

**3G-PC2 [Program]**

Identify and orally discuss expert opinion/statistical analysis/evidence impacting the computing field.

**11.2.1 Analysis of Data and Plan for Continuous Improvement**

2016-2017:

The result shows that students demonstrated an ability to analyze the local and global impact of computing on individuals, organizations, and society. Students need to work on incorporating statistical analysis, evidence, or expert opinion in CSCI 491 project. The SLO will be monitored for the next few cycles.

2017-2018:

The benchmark was met in 2017-2018 with improvement shown from previous year. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

The benchmark was met in 2018-2019 with some improvement compared to previous year. No action is needed. The data collected will be monitored for possible benchmark change.

**Course Links**

**CSCI491 [Seminar (Cr. 3)]**

**12 Assessment and Benchmark Alumni Survey**

Assessment: Alumni Survey questions targeting ABET SLO B.

Benchmark: A benchmark of 2.00 on a 3-point scale for the Alumni Survey.

2017-2018:

The benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

Data is not collected for the 2018-19 period. Based on changes on ABET requirements a new

cycle will be determined in 2019-20.

### Outcome Links

#### ABET CAC [External]

##### ABET CAC 3B

An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution

## 12.1 Data

Academic Year	Alumni Survey Average
2013-2014	2.67/3.00
2017-2018	4.05/5.00
2018-2019	—

### 12.1.1 Analysis of Data and Plan for Continuous Improvement [Approved]

2013-2014:

The result shows that students demonstrated strong ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.

The reported data is the only data available to date. Continue tracking data when the next survey is completed.

2017-2018:

The benchmark was met in 2017-2018 with improvement from the previous year seen. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

Data is not collected for the 2018-19 period. Based on changes on ABET requirements a new cycle will be determined in 2019-20.

## 13 Assessment and Benchmark Employer Survey

Assessment: Employer Survey questions targeting ABET SLOs B, D, and E.

Employer Survey questions targeting SLO B:

Benchmark: A benchmark of 2.50 on a 3-point scale for the Employer Survey.

Employer Survey questions targeting SLO D:

Benchmark: A benchmark of 3.50 on a 5-point scale for the Employer Survey.

Employer Survey questions targeting SLO E:

Benchmark: A benchmark of 3.50 on a 5-point scale for the Employer Survey.

Prior to 2016-2017, the benchmark was 2.00 on a 3-point scale.

2017-2018:

The benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

Data is not collected for the 2018-19 period. Based on changes on ABET requirements a new cycle will be determined in 2019-20.

### Outcome Links

#### ABET CAC [External]

##### ABET CAC 3B

An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution

**ABET CAC 3D**

An ability to function effectively on teams to accomplish a common goal

**ABET CAC 3E**

An understanding of professional, ethical, legal, security and social issues and responsibilities

**13.1 Data**

Employer Survey questions targeting SLO B.

Academic Year	Employer Survey Average
2013-2014	2.83/3.00
2014-2015	2.83/3.00
2015-2016	2.76/3.00
2016-2017	—
2017-2018	4.76/5.00
2018-2019	—

Files: See list of attachments to view. (Requires Adobe Reader or compatible viewer).

3b

**Outcome Links****ABET CAC [External]****ABET CAC 3B**

An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution

**13.1.1 Analysis of Data and Plan for Continuous Improvement [Approved]**

2016-2017:

The data will collected in the next cycle.

2017-2018:

The benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

Data is not collected for the 2018-19 period. Based on changes on ABET requirements a new cycle will be determined in 2019-20.

**13.2 Data**

Employer Survey questions targeting SLO D.

Academic Year	Employer Survey Average
2013-2014	2.83/3.00 (4.72/5.00*)
2014-2015	2.83/3.00 (4.72/5.00*)
2015-2016	2.76/3.00 (4.60/5.00*)
2016-2017	—
2017-2018	4.00/5.00
2018-2019	—

\*Converted.



### Outcome Links

#### ABET CAC [External]

##### ABET CAC 3D

An ability to function effectively on teams to accomplish a common goal

### 13.2.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

The data will be collected in the next cycle.

2017-2018:

The benchmark was met in 2017-2018. The data collected will be monitored for possible benchmark change.

2018-2019:

Data is not collected for the 2018-2019 period. Based on changes on ABET requirements a new cycle will be determined in 2019-2020.

### 13.3 Data

Employer Survey questions targeting SLO E.

Academic Year	Employer Survey Average
2013-2014	2.83/3.00 (4.72/5.00*)
2014-2015	2.83/3.00 (4.72/5.00*)
2015-2016	2.76/3.00 (4.60/5.00*)
2016-2017	—
2017-2018	4.33/5.00
2018-2019	—

\*Converted.

### Outcome Links

#### ABET CAC [External]

##### ABET CAC 3E

An understanding of professional, ethical, legal, security and social issues and responsibilities

### 13.3.1 Analysis of Data and Plan for Continuous Improvement [Approved]

2016-2017:

The data will be collected in the next cycle.

2017-2018:

The benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

Data is not collected for the 2018-2019 period. Based on changes to ABET requirements a new cycle will be determined in 2019-2020.

### 14 Assessment and Benchmark Senior Exit Survey [Approved]

Assessment: Senior Exit Survey questions targeting ABET SLO D and E.

Senior Exit Survey questions targeting SLO D:

Benchmark: A benchmark of 3.50 on a 5-point scale for the Senior Exit Survey.

Senior Exit Survey questions targeting SLO E:

Benchmark: A benchmark of 3.67 on a 5-point scale for the Senior Exit Survey.

#### Outcome Links

#### ABET CAC [External]

##### ABET CAC 3D

An ability to function effectively on teams to accomplish a common goal

##### ABET CAC 3E

An understanding of professional, ethical, legal, security and social issues and responsibilities

### 14.1 Data

Senior Exit Survey questions targeting SLO D.

Academic Year	Senior Exit Survey Average
2013-2014	2.65/3.00 (4.42/5.00*)
2014-2015	2.79/3.00 (4.65/5.00*)
2015-2016	2.73/3.00 (4.55/5.00*)
2016-2017	—
2017-2018	3.78/5.00
2018-2019	—

\*Converted.

#### Outcome Links

#### ABET CAC [External]

##### ABET CAC 3D

An ability to function effectively on teams to accomplish a common goal

### 14.1.1 Analysis of Data and Plan for Continuous Improvement [Approved]

2015-2016:

The result shows that students feel that they demonstrate an understanding of professional, ethical, legal, security and social issues and responsibilities.

2016-2017:

The data will be collected in the next cycle.

2017-2018:

The benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

Data was not collected for 2018-19 period. A new survey will be created to meet the new ABET requirements.

### 14.2 Data

Senior Exit Survey questions targeting SLO E.

Academic Year	Senior Exit Survey Average
	2.76/3.00

2013-2014	(4.60/5.00*)
2014-2015	2.86/3.00 (4.77/5.00*)
2015-2016	2.40/3.00 (4.00/5.00*)
2016-2017	—
2017-2018	4.04/5.00
2018-2019	—

\*Converted.

### Outcome Links

#### ABET CAC [External]

##### ABET CAC 3E

An understanding of professional, ethical, legal, security and social issues and responsibilities

#### 14.2.1 Analysis of Data and Plan for Continuous Improvement [Approved]

2016-2017:

The data will be collected in the next cycle.

2017-2018:

The benchmark was met in 2017-2018. No action is needed. The data collected will be monitored for possible benchmark change.

2018-2019:

Data was not collected for 2018-19 period. A new survey will be created to meet the new ABET requirements.

End of report