University of Louisiana at Lafayette

Detailed Assessment Report
2015-2016 Computer Science PhD

As of: 11/17/2016 11:01 AM CENTRAL

(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request*.)

Mission / Purpose

The primary mission of the doctoral program in computer science is to prepare and train students for careers in the research and teaching of computer science.

Student Learning Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Breadth of knowledge

All doctoral students must demonstrate breadth of knowledge as evidenced through expertise in at least two areas of computation.

Related Measures

M 1: Breadth of knowledge

Students' breadth of knowledge is assessed by a **written comprehensive examination** in the areas of computer algorithm analysis and theory of computation, software development, and applications. A student is examined in two areas of his or her own choice. Each area examination is a three-hour session and is prepared and graded by at least two graduate faculty members who are experts in that area. All CACS faculty members as a body meet every semester to review the examination and vote on whether a student has passed or failed an examination. Each student must receive a passing grade in both areas to pass an examination. This assessment is conducted in the 2nd year of a student's Ph.D. studies. The written comprehensive exam is conducted every year in January and August.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Target:

At least 70% of the students who attempt the comprehensive examination must pass it.

Connected Document

Rubric

Finding (2015-2016) - Target: Met

Eight CS PhD students attempted the comprehensive exam in Fall 2015. Specifically, six students attempted two areas with three students passing both areas and three students passing one area. Two students attempted one area. Both students passed the attempted area. The percentage rate of successful comprehensive examination is 78.5%.

Six CS PhD students attempted the comprehensive exam in Spring 2016. Specifically, four students attempted two areas with two students passing both areas and two students passing one area. Two students attempted one area. One student passed while the other student failed the attempted area. The percentage rate of successful comprehensive examination is 70%.

The goal of at least 70% of the students who attempt the comprehensive examination must pass it was met.

Related Action Plans (by Established cycle, then alpha):

Action Plan

Do a detailed review of goals as well as their assessment and evaluation strategy in Fall 2014.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):

Measure: Breadth of knowledge | **Outcome/Objective:** Breadth of knowledge

Continued Implementation of Assessment

Continued Implementation of Assessment

Established in Cycle: 2015-2016
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):

Measure: Breadth of knowledge | **Outcome/Objective:** Breadth of knowledge
Measure: Original research | **Outcome/Objective:** Original research
Measure: Presentation of research | **Outcome/Objective:** Presentation of research
Measure: Publication of research | **Outcome/Objective:** Publication of research

SLO 2: Original research

Doctoral students must be able to do original research in an area of computing.

Related Measures

M 2: Original research

All doctoral students must show ability to do original research in an area of computing. All doctoral students are required to pass Ph.D. prospectus exam which is examined by student's advisor as well as committee members. The percentage of students who pass their prospectus indicates the degree of success of this outcome.

Source of Evidence: Academic direct measure of learning - other

Target:
At least 70% of the students who take prospectus exam must pass it. Prospectus exam demonstrates the ability to do original research.

Finding (2015-2016) - Target: Met
Three computer science PhD students took prospectus exam during the FA15-SP16 academic year. All passed the exam.

All received a score of 2.0 or higher on breadth assessment rubric C. Specifically, all students received a score of 3.0 on "research background survey". All students received a score of 3.0 on "pilot study". Two students received a score of 3.0 and one student received a score of 2.0 on "research plan". The mean scores were 3.0, 3.0, and 2.7, respectively.

The goal of at least 70% of the students who take prospectus exam must pass it was met. The goal of each student should obtain at least a score of 2.0 in each

of the three areas on breadth assessment rubric C was also met.

Related Action Plans (by Established cycle, then alpha):

Action Plan

Do a detailed review of goals as well as their assessment and evaluation strategy in Fall 2014.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Original research | **Outcome/Objective:** Original research

Continued Implementation of Assessment

Continued Implementation of Assessment

Established in Cycle: 2015-2016
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Breadth of knowledge | **Outcome/Objective:** Breadth of knowledge
Measure: Original research | **Outcome/Objective:** Original research
Measure: Presentation of research | **Outcome/Objective:** Presentation of research
Measure: Publication of research | **Outcome/Objective:** Publication of research

M 5: ..to be deleted...

..to be deleted...

Source of Evidence: Comprehensive/end-of-program subject matter exam

Target:

Students must score at least a total of 2 out of 3 to pass this assessment using Rubric B. At least 70% of the students who are examined orally for the breadth of knowledge will pass it.

Connected Document

Rubric

Related Action Plans (by Established cycle, then alpha):

Action Plan

Do a detailed review of goals as well as their assessment and evaluation strategy in Fall 2014.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: ..to be deleted... | **Outcome/Objective:** Original research

SLO 3: Presentation of research

All doctoral students must be able to present their research

Related Measures

M 3: Presentation of research

All doctoral must be able to present their research in a formal setting. Doctoral defenses are used to measure this outcome. The percentage of students who successfully defend their dissertation
indicates the degree of success of this outcome.

Source of Evidence: Senior thesis or culminating major project

Target:
At least 70% of the students who take their doctoral defense exam will pass it.

Finding (2015-2016) - Target: Partially Met

Two computer science PhD students took their doctoral defense exam during the FA15-SP16 academic year. Both passed the exam.

One student received a score of 3.0 in each of the three areas on breadth assessment rubric D. The other student received a score of 2.0 on "oral and written presentation", a score of 3.0 on "research work", and a score of 1.5 on "results analysis". The mean scores were 2.5, 3.0, and 2.25, respectively.

The goal of at least 70% of the students who take their doctoral defense exam will pass it was met, while the goal of each student should obtain at least a score of 2.0 in each of the three areas on breadth assessment rubric D was not met.

Since there are only two students in this sample, the results could be biased. We will not take any action plan this year, but wait to check the breadth assessment of next year.

Related Action Plans (by Established cycle, then alpha):

Action Plan

Do a detailed review of goals as well as their assessment and evaluation strategy in Fall 2014.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Presentation of research | **Outcome/Objective:** Presentation of research

Continued Implementation of Assessment

Continued Implementation of Assessment

Established in Cycle: 2015-2016
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Breadth of knowledge | **Outcome/Objective:** Breadth of knowledge
Measure: Original research | **Outcome/Objective:** Original research
Measure: Presentation of research | **Outcome/Objective:** Presentation of research
Measure: Publication of research | **Outcome/Objective:** Publication of research

SLO 4: Publication of research

Doctoral students must be able to publish their research in a peer reviewed medium.

Related Measures

M 4: Publication of research

Doctoral students must be able to publish their work in a peer reviewed medium. The percentage of doctoral students
who are able to achieve one or more peer reviewed publication will indicate the degree of success of this outcome.

Source of Evidence: Senior thesis or culminating major project

Target:
At least 70% of doctoral students must graduate with at least one peer reviewed research publication.

Connected Document
Rubric

Finding (2015-2016) - Target: Met

Two computer science PhD students graduated during the FA15-SP16 academic year. Based on **DBLP** (a computer science bibliography website), one student has published one peer reviewed research paper, and the other one has published three peer reviewed research papers. Note that the numbers donot include the submitted or under reviewed papers. The goal of at least 70% of doctoral students must graduate with at least one peer reviewed research publication was met.

Related Action Plans (by Established cycle, then alpha):

Action Plan

Do a detailed review of goals as well as their assessment and evaluation strategy in Fall 2014.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Publication of research | **Outcome/Objective:** Publication of research

Research publication prior to graduation

All advisors will ensure that their doctoral students have at least one accepted or published research paper prior to students' graduation as much as possible.

Established in Cycle: 2014-2015
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Publication of research | **Outcome/Objective:** Publication of research

Continued Implementation of Assessment

Continued Implementation of Assessment

Established in Cycle: 2015-2016
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):

Measure: Breadth of knowledge | **Outcome/Objective:** Breadth of knowledge
Measure: Original research | **Outcome/Objective:** Original research
Measure: Presentation of research | **Outcome/Objective:** Presentation of research
Measure: Publication of research | **Outcome/Objective:** Publication of research

Analysis Questions and Analysis Answers

How were assessment results shared and evaluated within the unit?

All faculty and staff in CACS were emailed a copy of the detailed assessment report.

Identify which action plans [created in prior cycle(s)] were implemented in this current cycle. For each of these implemented plans, were there any measurable or perceivable effects? How, if at all, did the findings appear to be affected by the implemented action plan?

The program achieved all its outcomes.

What has the unit learned from the current assessment cycle? What is working well, and what is working less well in achieving desired outcomes?

With robust data collection and mapping, the program has achieved the outcomes.