

Annual Planning and Assessment of *Student Learning Outcomes* Template

Academic Unit: College of Engineering
 Academic Program: Master of Science in Computer Science
 Year of Assessment: 2018-2019
 Department Chair: Dr. Ali Sekmen

Program Purpose: The MS in CS Program prepares students for employment in computer science or closely related fields, or to pursue PhD education. Graduates are expected demonstrate professional growth evidenced by measurable development activities and leadership roles.

Student Learning Outcomes	Measurement Tool	Criteria for Success/Performance Target	Results and Analysis	Use of Results for Improvement
<p>SLO – 1: Students will be able to analyze a complex computing problem and to apply principles of computing to identify solutions in constructing a software system design.</p>	<p>Thesis Option: This outcome is assessed with the Thesis Committee’s evaluation of Thesis Proposal for</p> <ul style="list-style-type: none"> • Analysis of Research Problem (Student’s written product indicates use of computing principles relevant to the project topic.) • Identification of Solution for Research Problem (Student’s written product indicates use of computing principles to identify potential solutions to the project.) <p>Non-Thesis Option:</p>	<p>Thesis Option: The criteria is that 80% of the students score 3.5/5 or higher in each of these tools: Analysis of Research Problem and Identification of Solution.</p> <p>Non-Thesis Option: The criteria is that 80% of the students score 70 points or higher in Analysis of Research Problem and Identification of Solution for Research Problem. Benchmark target was established based on historical data of student performance in the program.</p>	<p>Thesis Option: Number of students scoring 3.5/5 or higher</p> <ul style="list-style-type: none"> • 2 out of 4 (100%) for Analysis of Research Problem • 2 out of 4 (50%) for Identification of Solution <p>Non-Thesis Option: Number of students scoring 70% or higher</p> <ul style="list-style-type: none"> • 20 out of 24 (83%) for Analysis of Research Problem • 20 out of 24 (83%) for Identification of Solution 	<p>SLO-1 was not satisfied for thesis option. It was satisfied for non-thesis option. In 2017-18, more faculty were requested to pursue research grants in order to increase the support to students who desire to enroll in the thesis option. This intervention will continue to be monitored to reassess the impact on student learning and assessment results.</p> <ul style="list-style-type: none"> • An ad-hoc committee from the graduate program faculty was formed to investigate the factors for low scores on system analysis in Fall-2019. • Based on the recommendation from 2017-2018 assessment recommendation, the faculty successfully pursued research funding. Four new research grants from NSF, AFRL, and USDA, bring the active funding amount to over \$2M active research grants in 2018-2019.

	<p>This outcome is assessed with the following measures from the semester projects in COMP 6400 and COMP 6700</p> <ul style="list-style-type: none"> • Analysis of Research Problem (Student's written product indicates use of computing principles relevant to the project topic.) • Identification of Solution for Research Problem (Student's written product indicates use of computing principles to identify potential solutions to the project.) 			
<p>SLO – 2: (Cybersecurity and Networking Concentration) Students will be able to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements with the focus of Cybersecurity or Networking.</p>	<p>Thesis Option: This outcome is assessed with the Thesis Committee's evaluation of Master Thesis for</p> <ul style="list-style-type: none"> • Design of Computing-Based Solution (Student's written product indicates ability to design computing-based solutions.) • Implementation of Design (Student's written product demonstrates an implementation of a computing-based design.) • Evaluation of Solution (Student's written product presents an evaluation of a computing-based software system.) <p>Non-Thesis Option: This outcome is assessed with the following measures from the semester project in</p>	<p>Thesis Option: The criteria is that 80% of the students score 3.5/5 or higher in each of these tools: Design of Computing-Based Solution, Implementation of Design, and Evaluation of Solution.</p> <p>Non-Thesis Option: The criteria is that 80% of the students score 70 points or higher in each of these tools: Design of Computing-Based Solution, Implementation of Design, and Evaluation of Solution. Benchmark target was established based on historical data of student performance in the program.</p>	<p>Thesis Option: Number of students scoring 3.5/5 or higher</p> <ul style="list-style-type: none"> • 3 out of 4 (75%) for Design of Computing-Based Solution • 3 out of 4 (75%) for Implementation of Design • 3 out of 4 (75%) for Evaluation of Solution <p>Overall, 83% of the measures, (5/6) were higher than 3.5/5. The criteria for SLO-2 are met.</p> <p>Non-Thesis Option: Number of students scoring 70% or higher</p> <ul style="list-style-type: none"> • 11 out of 13 (85%) for Design of Computing-Based Solution • 11 out of 13 (85%) for Implementation of Design • 11 out of 13 (85%) for Evaluation of Solution 	<p>SLO-2 was satisfied for both thesis and non-thesis options. Based on prior year results, students utilized two research laboratories and engaged in research with their peers collaborating on research activities. While there was a slight decrease in the number of students meeting the criteria compared to prior year results, the intervention was successful evidenced by the overall results of the measures.</p> <ul style="list-style-type: none"> • To improve in this student learning outcome, a faculty member was tasked to identify technical writing resources to be presented to the students in COMP 5920 for Fall-2019.

	<p>COMP 6700 Network Programming and Computing.</p> <ul style="list-style-type: none"> • Design of Computing-Based Solution (Student’s written product indicates ability to design computing-based solutions.) • Implementation of Design (Student’s written product demonstrates an implementation of a computing-based design.) • Evaluation of Solution (Student’s written product presents an evaluation of a computing-based software system.) 			
<p>SLO – 3: (HPC and Bioinformatics Concentration) Students will be able to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements with the focus of High-Performance Computing or Bioinformatics.</p>	<p>Thesis Option: This outcome is assessed with the Thesis Committee’s evaluation of Master Thesis for</p> <ul style="list-style-type: none"> • Design of Computing-Based Solution (Student’s written product indicates ability to design computing-based solutions.) • Implementation of Design (Student’s written product demonstrates an implementation of a computing-based design.) • Evaluation of Solution (Student’s written product presents an evaluation of a computing-based software system.) <p>Non-Thesis Option: This outcome is assessed with the following measures from the semester project in</p>	<p>Thesis Option: The criteria is that 80% of the students score 3.5/5 or higher in each of these tools: Design of Computing-Based Solution, Implementation of Design, and Evaluation of Solution.</p> <p>Non-Thesis Option: The criteria is that 80% of the students score 70 points or higher in each of these tools: Design of Computing-Based Solution, Implementation of Design, and Evaluation of Solution. Benchmark target was established based on historical data of student performance in the program.</p>	<p>Thesis Option: Number of students scoring 3.5/5 or higher</p> <ul style="list-style-type: none"> • We did not have any students doing Master Thesis II <p>Non-Thesis Option: Number of students scoring 70% or higher</p> <ul style="list-style-type: none"> • 9 out of 11 (82%) for Design of Computing-Based Solution • 9 out of 11 (82%) for Implementation of Design • 9 out of 11 (82%) for Evaluation of Solution 	<p>SLO-3 was satisfied for non-thesis option. Based on prior year results, students utilized two research laboratories and engaged in research with their peers collaborating on research activities. While there was a slight decrease in the number of students meeting the criteria compared to prior year results the intervention was successful and the criterion was met.</p> <ul style="list-style-type: none"> • The 2018-2019 results revealed that there was a decline in demand for HPC and Bioinformatics Concentration. This issue was discussed in a graduate committee meeting. A proposal for a new graduate concentration called “Data Sciences” was previously initiated by the graduate faculty. <ul style="list-style-type: none"> ✓ The Department Chair and College Dean to meet the demand in Data Sciences area initiated this. It was extensively discussed in multiple department meetings. ✓ The graduate faculty in HPC and Bioinformatics Concentration recommended that the proposed Data Sciences concentration replace HPC and Bioinformatics Concentration.

	<p>COMP 6400 Distributed Design and Data Analysis.</p> <ul style="list-style-type: none"> • Design of Computing-Based Solution (Student's written product indicates ability to design computing-based solutions.) • Implementation of Design (Student's written product demonstrates an implementation of a computing-based design.) • Evaluation of Solution (Student's written product presents an evaluation of a computing-based software system.) 			
<p>SLO – 4: Student will be able to convey a computational problem and its solution to an audience of computing professionals.</p>	<p>Thesis Option: This outcome is assessed with the Thesis Committee's evaluation of Thesis Proposal and Master Thesis for Communication via</p> <ul style="list-style-type: none"> • Written Proposal (Student's written product conveys a computational problem to an audience of computing professionals.) • Written Thesis (Student's written product conveys a computational system development to an audience of computing professionals.) • Proposal Defense (Student's oral product conveys a computational problem to an audience of computing professionals.) • Thesis Defense (Student's oral product conveys a computational system development to an 	<p>Thesis Option: The criteria is that 80% of the students score 3.5/5 or higher in each of these tools: Communication via Written Proposal, Written Thesis, Proposal Defense, and Thesis Defense</p> <p>Non-Thesis Option: The criteria is that 80% of the students score 70 points or higher in each of these tools: Project Presentation and Project report</p>	<p>Thesis Option: Number of students scoring 3.5/5 or higher</p> <ul style="list-style-type: none"> • 3 out of 4 (100%) for Written Proposal • 4 out of 4 (100%) for Written Thesis • 2 out of 4 (100%) for Proposal Defense • 4 out of 4 (100%) for Thesis Defense <p>Overall, 81% of the measures, (13/16) were higher than 3.5/5. The criteria for SLO-4 are met.</p> <p>Non-Thesis Option: Number of students scoring 70% or higher</p> <ul style="list-style-type: none"> • 20 out of 24 (83%) for Project Presentation • 20 out of 24 (83%) for Project Report 	<p>SLO-4 was satisfied for both thesis and non-thesis options.</p> <ul style="list-style-type: none"> • An ad-hoc committee from the graduate program faculty was formed to investigate the factors for low scores on thesis defense measures in Fall-2019. • A faculty member was tasked to identify technical writing resources to be presented to the students in COMP 5920 for Fall-2019.

audience of computing professionals.)

Non-Thesis Option:

This outcome is assessed with the following measures from the semester projects in COMP 6400 and COMP 6700

- Project Presentation
(Student's oral product conveys a computational problem and its solution to an audience of computing professionals.)
- Project Report
(Student's written product conveys a computational problem and its solution to an audience of computing professionals.)

MS in Computer Science

	SLO 1. Students will be able to analyze a complex computing problem and to apply principles of computing to identify solutions in constructing a software system design.	SLO 2. (Cybersecurity and Networking Concentration) Students will be able to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements with the focus of Cybersecurity or Networking.	SLO 3. (HPC and Bioinformatics Concentration) Students will be able to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements with the focus of High-Performance Computing or Bioinformatics.
COMP 5100 Software Engineering	I	I	I
COMP 5200 Advanced Algorithms Design and Analysis	I	I	
COMP 5300 Advanced Computer Architectures	I	I	I
COMP 5700 Fundamentals of Computer Networks	R	R	
COMP 5720 Cryptography and Computer Security	R	R	
COMP 5750 Computer Network Management and Security	R	R	R
COMP 6700 Network Programming	R	R	
COMP 5520 Introduction to High Performance Computing	R	R	I
COMP 5800 Introduction to Bioinformatics	I		
COMP 6100 Bioinformatics and Computational Biology	R		
COMP 6400 Distributed Algorithm Design and Data Analysis	R	R	R
COMP 5910 Master Thesis I	M, A	M, A	M, A
COMP 5920 Master Thesis II	M, A	M, A	M, A

ASSESSMENT RESULTS

AY 2018 / ASSESSMENT & IMPROVEMENT PLAN

Analysis and Identification of Solutions

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Plan Item was last modified on 7/31/19, 10:29 AM

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Template:

Student Learning Outcome (2015-2020)

Student Learning Outcome Name:

Analysis and Identification of Solutions

LO Number:

106-003.2-LO-01

Start:

7/1/2015

End:

6/30/2020

Progress:

Ongoing

Providing Department:

003 Computer Science (MS)

Responsible Roles:

Ali Sekmen (asekmen)

SECTION 1:

1. DEFINE LEARNING OUTCOME

1.1 Intended Outcome:

Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.

1.2 Criteria for Success:

For Thesis Option

(1) 75% of the students successfully defend their Thesis Proposal in first time taking COMP 5910.

(2) 75% of the students successfully defend their Master Thesis in first or second time taking COMP 5920.

For Non-Thesis Option

(1) 75% of the students successfully complete their 6 credit hours of design based courses with a minimum of B grade.

Frequency/Cycle of Measurement:

Annually

1.3 Means of measurement/assessment:

The MS in Computer Science Program offers thesis and non-thesis options. The program requires completion of either a 6-credit hour thesis (Master Thesis-I and Master Thesis-II), for the thesis option, or 6 credit hours of design-based courses, for the non-thesis option, in addition to 27 credit hours of concentration-specific coursework.

For thesis option, a thesis manuscript and an oral presentation are required to document the student's research activity. A thesis committee supervises the student's thesis work. In Master Thesis-I, the student is required to provide a Thesis Proposal to the committee. The Thesis Proposal provides comprehensive analysis of problem and identification of solutions as well as partial development and verification of the proposed solutions. COMP 5910 Master Thesis I requires completion of a Thesis Proposal Report and its successful defense. In Master Thesis-II, the student is required to provide a Master Thesis Manuscript that includes

comprehensive analysis, development, and verification of a computing system, COMP 5920 Master Thesis II requires completion of Master Thesis and its successful defense. Therefore, *Thesis Proposal Report*, *Thesis Proposal Defense*, *Master Thesis Report*, and *Master Thesis Defense* are used as means of measurement/assessment.

For non-thesis option, the student is required to take a minimum of 6 credit hours of design-based courses from a pool of courses determined by the Computer Science Graduate Faculty. Each design-based course requires a course project with problem analysis, identification of solution, system design, and verification. Therefore, *design-based coursework* are used as means of measurement/assessment.

Attached Files

There are no attachments.

SECTION 2:

REPORT RESULTS

2.1 Reporting data (2015-2016):

The MS in CS Program started in Fall-2014. Therefore, the 2015-2016 academic year was our first year to have some partial data to report.

For Thesis Option

	Spring-2015		Fall-2015		Spring-2016	
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	3	3	2	2
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass	1 st Attempt	Pass
	-	-	1	0	3	1
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass	2 nd Attempt	Pass
	-	-	1	1	1	1

For Non-Thesis Option

In Fall-2015 and Spring-2016, there were 17 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

Attached Files

There are no attachments.

2.2 Analyzing progress (2015-2016):

For Thesis Option

- 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 100% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-1 was satisfied.

For Non-Thesis Option

- 100% of the students completed their design-based courses successfully in Fall-2015 and Spring-2016.
- LO-1 was satisfied.

2.3 *Criteria met? (2015-2016)*:

MET,

2.1 Reporting data (2016-2017):**For Thesis Option**

	Fall-2016		Spring-2017	
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	1	1
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	1	1
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass
	2	1	2	1

For Non-Thesis Option

In Fall-2016 and Spring-2017, there were 13 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

Attached Files

There are no attachments.

2.2 Analyzing progress (2016-2017):**For Thesis Option**

- 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 66.7% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-1 was partially satisfied. All of the Thesis Proposals were successfully defended, however, 2 out of 6 students were delayed in defending their Master Theses. Since the number of data points is low, this progress must be monitored with larger numbers in the upcoming academic year.

For Non-Thesis Option

- 100% of the students completed their design-based courses successfully in Fall-2016 and Spring-2017.
- LO-1 was satisfied.

Attached Files

There are no attachments.

2.3 *Criteria met? (2016-2017)*:

MET,

2.1 Reporting Data (2017-2018):**For Non-Thesis Option**

In Fall-2017 and Spring-2018, there were 20 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

For Thesis Option

Attached Files

There are no attachments.

2.2 Analyzing progress (2017-2018):**For Thesis Option**

	Fall-2017		Spring-2018		
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass	<ul style="list-style-type: none"> 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course. 100% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
	3	3	4	4	
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass	<ul style="list-style-type: none"> LO-1 was satisfied.
	1	1	3	-	For Non-Thesis Option
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass	<ul style="list-style-type: none"> 100% of the students completed their design-based courses successfully in Fall-2017 and Spring-2018. LO-1 was satisfied.
	-	-	-	-	

Attached Files

There are no attachments.

2.3 Criteria met? (2017-2018):

MET,

2.1 Reporting Data 2018-2019:

For Thesis Option

	Fall-2018		Spring-2019	
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	4	3
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	3	1
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass
	3	2	1	0

For Non-Thesis Option

In Fall-2018 and Spring-2019, there were 25 design based courses taken by the students. There were 23 'A or B' grades, 1 'C' grade, and 1 'F' grades.

Attached Files

There are no attachments.

2.2 Analyzing Progress (2018-2019):

For Thesis Option

- 80% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 50% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-1 was partially satisfied.

For Non-Thesis Option

- 92% of the students completed their design-based courses successfully in Fall-2017 and Spring-2018.
- LO-1 was satisfied.

Attached Files

There are no attachments.

2.3 *Criteria Met? (2018-2019)*:

MET,

SECTION 3:

PLAN FOR IMPROVEMENT

3.1 Action plan(s):

ACTION PLAN - 1

Action: *Develop a 4+1 Degree Program (Accelerated MS in Computer Science Program).* This program specifically targets at the undergraduate students majoring in Computer Science at TSU. It gives them an opportunity to complete Master of Science in Computer Science degree program within two semesters upon completion of their Bachelor of Science in Computer Science degree program. The program provides our students majoring in the BS in CS program an opportunity to complete their Master's degrees in shorter time so that they enhance their careers and work on cutting-edge areas of computer science.

Proposal Date: Spring-2018

Target Date: Fall-2018

Actual Date: Fall-2018

Responsible Person: Dr. Ali Sekmen, Dr. Kamal Al Nasr, Dr. Tamara Rogers, and Dr. Wei Chen

Completed: Yes

Rationale: This action item was initiated by the CS Department Chair, who also teaches Senior Project I and II courses. The Chair discussed this concept (due to high demand, especially from senior CS majors) at multiple departmental meetings and the CS faculty unanimously approved development of Accelerated MS in Computer Science program. It was extensively discussed in the Dean's Leadership Council and supported by the other department chairs in the College. This program was developed as a team by all graduate faculty in the Department.

Impact: Our Accelerated MS in Computer Science Program has been widely demanded by the CS majors at TSU. This program had seven students admitted in Fall-2018 and six students admitted in Spring-2019. Two students completed their BS and MS degrees as of Summer-2019 as graduates of the Accelerated MS in CS Program. Our program is examined by other departments at TSU as a successfully first pilot program of its kind in the University.

ACTION PLAN - 2

Action: *Increase research grants funding to support more students for thesis option.* All computer science faculty are asked to pursue more funded research opportunities.

Proposal Date: Fall-2015

Target Date: On Going

Actual Date: On Going

Responsible Person: All graduate faculty

Completed: On Going (the CS faculty has about \$2.3M active research grants in 2018-2019 Academic Year).

Rationale: This action item was initiated by the Department Chair, who also teaches COMP 5900 Master Thesis I and COMP 5910 Master Thesis II courses. Based on the number of students preferring thesis option over non-thesis option, the Chair requested that more faculty pursues research grants. This was discussed in multiple departmental meetings and supported by all faculty.

Impact: The number of students supported by research has increased over the years. For example, one faculty member supported 11 graduate and undergraduate students from his research grants in Spring-2019.

ACTION PLAN - 3

Action: *Develop a new course titled COMP 6400 Distributed Algorithm Design and Data Analysis.* This course is a project-based course with hands-on experience on distributed computing.

Proposal Date: Fall-2015

Target Date: Fall-2016

Actual Date: Fall-2016

Responsible Person: Dr. Kamal Al Nasr and Dr. Matthew Hayes

Completed: Yes

Rationale: This action item was initiated by the graduate faculty in High-Performance Computing and Bioinformatics concentration. It was extensively discussed in Department Curriculum Committee (e.g. Nov16, 2016 meeting) and approved. It was also discussed by the entire faculty in a departmental meeting.

ACTION PLAN - 4

Action: *Develop a new course titled COMP 6700 Network Programming and Computing.*

Proposal Date: Fall-2015

Target Date: Fall-2016

Actual Date: Fall-2016

Responsible Person: Dr. Erdem Erdemir and Dr. Wei Chen

Completed: Yes

Rationale: This action item was initiated by the graduate faculty in Cyber-Security and Networking concentration. It was extensively discussed in Department Curriculum Committee (e.g. Nov16, 2016 meeting) and approved. It was also discussed by the entire faculty in a departmental meeting.

ACTION PLAN - 5

Action: *Utilize the Bioinformatics Laboratory in TIGER Institute for providing more hands-on opportunities for COMP 5800 Introduction to Bioinformatics and COMP 6100 Bioinformatics and Computational Biology courses.*

Proposal Date: Fall-2015

Target Date: Fall-2016

Actual Date: Fall-2017

Responsible Person: Dr. Kamal Al Nasr and Dr. Matthew Hayes

Completed: Yes

Rationale: This action item was initiated by the graduate faculty in High-Performance Computing and Bioinformatics concentration. It was strongly supported by the Department Chair. It was also discussed by the entire faculty in a departmental meeting.

Impact: The number of students using TIGER Institute research facility increased. It provides an environment for our students to collaborate in research.

Attached Files

[Agenda - Department Meeting 3-7-18](#)

[Agenda - Department Meeting 4-6-18](#)

[Minutes - Curriculum Committee Meeting 11-29-16](#)

[Minutes - Graduate Faculty Meeting Minutes 10-9-17](#)

3.2 Documentation:

Linked Documents

There are no attachments.

Attached Files

There are no attachments.

Related Items

Supports (*Connected Up*):

Scholarly Inquiry [Instruction]

000 Institution University Mission

Student Success and Customer Service

000 Institution TSU 2020 Strategic Plan

Supported By (*Connected Down*):

No supported by items currently associated

AY 2018 / ASSESSMENT & IMPROVEMENT PLAN

Develop and Verify Computing Systems

This view always presents the most current state of the plan item.

Plan Item was last modified on 7/31/19, 10:28 AM

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Template:

Student Learning Outcome (2015-2020)

Student Learning Outcome Name:

Develop and Verify Computing Systems

LO Number:

106-003.2-LO-02

Start:

7/1/2015

End:

6/30/2020

Progress:

Ongoing

Providing Department:

003 Computer Science (MS)

Responsible Roles:

Ali Sekmen (asekmen)

SECTION 1:

1. DEFINE LEARNING OUTCOME

1.1 Intended Outcome:

Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements with the focus of their concentrations.

1.2 Criteria for Success:

For Thesis Option

(1) 75% of the students successfully defend their Thesis Proposal in first time taking COMP 5910.

(2) 75% of the students successfully defend their master Thesis in first or second time taking COMP 5920.

For Non-Thesis Option

(1) 75% of the students successfully complete their 6 credit hours of design based courses with a minimum of B grade.

Frequency/Cycle of Measurement:

Annually

1.3 Means of measurement/assessment:

The MS in Computer Science Program offers thesis and non-thesis options. The program requires completion of either a 6-credit hour thesis (Master Thesis-I and Master Thesis-II), for the thesis option, or 6 credit hours of design-based courses, for the non-thesis option, in addition to 27 credit hours of concentration-specific coursework.

For thesis option, a thesis manuscript and an oral presentation are required to document the student's research activity. A thesis committee supervises the student's thesis work. In Master Thesis-I, the student is required to provide a Thesis Proposal to the committee. The Thesis Proposal provides comprehensive analysis of problem and identification of solutions as well as partial development and verification of the proposed solutions. COMP 5910 Master Thesis I requires completion of a Thesis Proposal

Report and its successful defense. In Master Thesis-II, the student is required to provide a Master Thesis Manuscript that includes comprehensive analysis, development, and verification of a computing system, COMP 5920 Master Thesis II requires completion of Master Thesis and its successful defense. Therefore, Thesis Proposal Report, Thesis Proposal Defense, Master Thesis Report, and Master Thesis Defense are used as means of measurement/assessment.

For non-thesis option, the student is required to take a minimum of 6 credit hours of design-based courses from a pool of courses determined by the Computer Science Graduate Faculty. Each design-based course requires a course project with problem analysis, identification of solution, system design, and verification. Therefore, design-based coursework are used as means of measurement/assessment.

Attached Files

There are no attachments.

SECTION 2:

REPORT RESULTS

2.1 Reporting data (2015-2016):

The MS in CS Program started in Fall-2014. Therefore, the 2015-2016 academic year was our first year to have some partial data to report.

For Thesis Option

	Spring-2015	Fall-2015	Spring-2016	
Thesis Proposal Defense	1 st Attempt	Pass 1 st Attempt	Pass 1 st Attempt	Pass
	1	1 3	3 2	2
Master Thesis Defense	1 st Attempt	Pass 1 st Attempt	Pass 1 st Attempt	Pass
	-	- 1	0 3	1
Master Thesis Defense	2 nd Attempt	Pass 2 nd Attempt	Pass 2 nd Attempt	Pass
	-	- 1	1 1	1

For Non-Thesis Option

In Fall-2015 and Spring-2016, there were 17 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

Attached Files

There are no attachments.

2.2 Analyzing progress (2015-2016):

For Thesis Option

- 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 100% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-2 was satisfied.

For Non-Thesis Option

- 100% of the students completed their design-based courses successfully in Fall-2015 and Spring-2016.
- LO-2 was satisfied.

2.3 *Criteria met? (2015-2016)*:

MET,

2.1 Reporting data (2016-2017):

For Thesis Option

	Fall-2016	Spring-2017		
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	1	1
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	1	1
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass
	2	1	2	1

For Non-Thesis Option

In Fall-2016 and Spring-2017, there were 13 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

Attached Files

There are no attachments.

2.2 Analyzing progress (2016-2017):

For Thesis Option

- 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 66.7% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-2 was partially satisfied.

For Non-Thesis Option

- 100% of the students completed their design-based courses successfully in Fall-2016 and Spring-2017.
- LO-2 was satisfied.

Attached Files

There are no attachments.

2.3 *Criteria met? (2016-2017)*:

MET,

2.1 Reporting Data (2017-2018):

For Thesis Option

For Non-Thesis Option

In Fall-2017 and Spring-2018, there were 20 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

Attached Files

There are no attachments.

2.2 Analyzing progress (2017-2018):

For Thesis Option

	Fall-2017		Spring-2018		
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass	<ul style="list-style-type: none"> 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course. 100% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
	3	3	4	4	
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass	<ul style="list-style-type: none"> LO-2 was satisfied.
	1	1	3	-	
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass	<ul style="list-style-type: none"> 100% of the students completed their design-based courses successfully in Fall-2017 and Spring-2018. LO-2 was satisfied.
	-	-	-	-	

For Non-Thesis Option

Attached Files

There are no attachments.

2.3 Criteria met? (2017-2018):

MET,

2.1 Reporting Data 2018-2019:

For Thesis Option

	Fall-2018		Spring-2019	
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	4	3
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	3	1
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass
	3	2	1	0

For Non-Thesis Option

In Fall-2018 and Spring-2019, there were 25 design based courses taken by the students. There were 23 'A or B' grades, 1 'C' grade, and 1 'F' grades.

Attached Files

There are no attachments.

2.2 Analyzing Progress (2018-2019):

For Thesis Option

- 80% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 50% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-2 was partially satisfied.

For Non-Thesis Option

- 92% of the students completed their design-based courses successfully in Fall-2017 and Spring-2018.
- LO-2 was satisfied.

Attached Files

There are no attachments.

2.3 *Criteria Met? (2018-2019)*:

MET,

SECTION 3:

PLAN FOR IMPROVEMENT

3.1 Action plan(s):

ACTION PLAN - 1

Action: *Develop a 4+1 Degree Program (Accelerated MS in Computer Science Program).* This program specifically targets at the undergraduate students majoring in Computer Science at TSU. It gives them an opportunity to complete Master of Science in Computer Science degree program within two semesters upon completion of their Bachelor of Science in Computer Science degree program. The program provides our students majoring in the BS in CS program an opportunity to complete their Master's degrees in shorter time so that they enhance their careers and work on cutting-edge areas of computer science.

Proposal Date: Spring-2018

Target Date: Fall-2018

Actual Date: Fall-2018

Responsible Person: Dr. Ali Sekmen, Dr. Kamal Al Nasr, Dr. Tamara Rogers, and Dr. Wei Chen

Completed: Yes

Rationale: This action item was initiated by the CS Department Chair, who also teaches Senior Project I and II courses. The Chair discussed this concept (due to high demand, especially from senior CS majors) at multiple departmental meetings and the CS faculty unanimously approved development of Accelerated MS in Computer Science program. It was extensively discussed in the Dean's Leadership Council and supported by the other department chairs in the College. This program was developed as a team by all graduate faculty in the Department.

Impact: Our Accelerated MS in Computer Science Program has been widely demanded by the CS majors at TSU. This program had seven students admitted in Fall-2018 and six students admitted in Spring-2019. Two students completed their BS and MS degrees as of Summer-2019 as graduates of the Accelerated MS in CS Program. Our program is examined by other departments at TSU as a successfully first pilot program of its kind in the University.

ACTION PLAN - 2

Action: *Increase research grants funding to support more students for thesis option.* All computer science faculty are asked to pursue more funded research opportunities.

Proposal Date: Fall-2015

Target Date: On Going

Actual Date: On Going

Responsible Person: All graduate faculty

Completed: On Going (the CS faculty has about \$2.3M active research grants in 2018-2019 Academic Year).

Rationale: This action item was initiated by the Department Chair, who also teaches COMP 5900 Master Thesis I and COMP 5910 Master Thesis II courses. Based on the number of students preferring thesis option over non-thesis option, the Chair requested that more faculty pursues research grants. This was discussed in multiple departmental meetings and supported by all faculty.

Impact: The number of students supported by research has increased over the years. For example, one faculty member supported 11 graduate and undergraduate students from his research grants in Spring-2019.

ACTION PLAN - 3

Action: *Develop a new course titled COMP 6400 Distributed Algorithm Design and Data Analysis.* This course is a project-based course with hands-on experience on distributed computing.

Proposal Date: Fall-2015

Target Date: Fall-2016

Actual Date: Fall-2016

Responsible Person: Dr. Kamal Al Nasr and Dr. Matthew Hayes

Completed: Yes

Rationale: This action item was initiated by the graduate faculty in High-Performance Computing and Bioinformatics concentration. It was extensively discussed in Department Curriculum Committee (e.g. Nov16, 2016 meeting) and approved. It was also discussed by the entire faculty in a departmental meeting.

ACTION PLAN - 4

Action: *Develop a new course titled COMP 6700 Network Programming and Computing.*

Proposal Date: Fall-2015

Target Date: Fall-2016

Actual Date: Fall-2016

Responsible Person: Dr. Erdem Erdemir and Dr. Wei Chen

Completed: Yes

Rationale: This action item was initiated by the graduate faculty in Cyber-Security and Networking concentration. It was extensively discussed in Department Curriculum Committee (e.g. Nov16, 2016 meeting) and approved. It was also discussed by the entire faculty in a departmental meeting.

ACTION PLAN - 5

Action: *Utilize the Bioinformatics Laboratory in TIGER Institute for providing more hands-on opportunities for COMP 5800 Introduction to Bioinformatics and COMP 6100 Bioinformatics and Computational Biology courses.*

Proposal Date: Fall-2015

Target Date: Fall-2016

Actual Date: Fall-2017

Responsible Person: Dr. Kamal Al Nasr and Dr. Matthew Hayes

Completed: Yes

Rationale: This action item was initiated by the graduate faculty in High-Performance Computing and Bioinformatics concentration. It was strongly supported by the Department Chair. It was also discussed by the entire faculty in a departmental meeting.

Impact: The number of students using TIGER Institute research facility increased. It provides an environment for our students to collaborate in research.

Attached Files

[Agenda - Department Meeting 3-7-18](#)

[Agenda - Department Meeting 4-6-18](#)

[Minutes - Curriculum Committee Meeting 11-29-16](#)

[Minutes - Graduate Faculty Meeting Minutes 10-9-17](#)

3.2 Documentation:

Linked Documents

There are no attachments.

Attached Files

There are no attachments.

Related Items

Supports (*Connected Up*):

Scholarly Inquiry [Instruction]

000 Institution University Mission

Student Success and Customer Service

000 Institution TSU 2020 Strategic Plan

Supported By (*Connected Down*):

No supported by items currently associated

AY 2018 / ASSESSMENT & IMPROVEMENT PLAN

Professional Communication

This view always presents the most current state of the plan item.

Plan Item was last modified on 7/31/19, 10:30 AM

Your individual permission settings determine what fields and content are visible to you.

Template:

Student Learning Outcome (2015-2020)

Student Learning Outcome Name:

Professional Communication

LO Number:

106-003.2-LO-03

Start:

7/1/2015

End:

6/30/2020

Progress:

Ongoing

Providing Department:

003 Computer Science (MS)

Responsible Roles:

Ali Sekmen (asekmen)

SECTION 1:

1.1 Intended Outcome:

Communicate effectively in a variety of professional contexts.

1.2 Criteria for Success:

For Thesis Option

(1) 75% of the students successfully defend their Thesis Proposal in first time taking COMP 5910.

(2) 75% of the students successfully defend their master Thesis in first or second time taking COMP 5920.

For Non-Thesis Option

(1) 75% of the students successfully complete their 6 credit hours of design based courses with a minimum of B grade.

Frequency/Cycle of Measurement:

Annually

1.3 Means of measurement/assessment:

The MS in Computer Science Program offers thesis and non-thesis options. The program requires completion of either a 6-credit hour thesis (Master Thesis-I and Master Thesis-II), for the thesis option, or 6 credit hours of design-based courses, for the non-thesis option, in addition to 27 credit hours of concentration-specific coursework.

For thesis option, a thesis manuscript and an oral presentation are required to document the student's research activity. A thesis committee supervises the student's thesis work. In Master Thesis-I, the student is required to provide an oral presentation (of Thesis Proposal) to the committee. In Master Thesis-II, the student is required to provide a Master Thesis Manuscript that includes comprehensive analysis, development, and verification of a computing system, COMP 5920 Master Thesis II requires completion of Master Thesis and its successful oral defense. Therefore, Thesis Proposal Defense (with oral presentation), and Master Thesis Defense (with oral presentation) are used as means of measurement/assessment.

For non-thesis option, the student is required to take a minimum of 6 credit hours of design-based courses from a pool of courses determined by the Computer Science Graduate Faculty. Each design-based course requires a class project with problem analysis, identification of solution, system design, and verification. Most of those courses also require a successful oral presentation of the class projects. Therefore, design-based coursework are used as means of measurement/assessment.

Attached Files

There are no attachments.

SECTION 2:

2.1 Reporting data (2015-2016):

The MS in CS Program started in Fall-2014. Therefore, the 2015-2016 academic year was our first year to have some partial data to report.

For Thesis Option

	Spring-2015	Fall-2015	Spring-2016	
Thesis Proposal Defense	1 st Attempt	Pass 1 st Attempt	Pass 1 st Attempt	Pass
	1	1 3	3 2	2
Master Thesis Defense	1 st Attempt	Pass 1 st Attempt	Pass 1 st Attempt	Pass
	-	- 1	0 3	1
Master Thesis Defense	2 nd Attempt	Pass 2 nd Attempt	Pass 2 nd Attempt	Pass
	-	- 1	1 1	1

For Non-Thesis Option

In Fall-2015 and Spring-2016, there were 17 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

Attached Files

There are no attachments.

2.2 Analyzing progress (2015-2016):

For Thesis Option

- 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 100% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-3 was satisfied.

For Non-Thesis Option

- 100% of the students completed their design-based courses successfully in Fall-2015 and Spring-2016.
- LO-1 was satisfied.

2.3 *Criteria met? (2015-2016)*:

2.1 Reporting data (2016-2017):

For Non-Thesis Option

In Fall-2016 and Spring-2017, there were 13 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

For Thesis Option

	Fall-2016	Spring-2017		
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	1	1
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	1	1
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass
	2	1	2	1

Attached Files

There are no attachments.

2.2 Analyzing progress (2016-2017):**For Thesis Option**

- 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 66.7% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-3 was partially satisfied.

For Non-Thesis Option

- 100% of the students completed their design-based courses successfully in Fall-2016 and Spring-2017.
- LO-3 was satisfied.

Attached Files

There are no attachments.

2.3 *Criteria met? (2016-2017)*:**2.1 Reporting Data (2017-2018):****For Non-Thesis Option**

In Fall-2017 and Spring-2018, there were 20 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

For Thesis Option

	Fall-2017	Spring-2018		
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass
	3	3	4	4
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	3	-
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass
	-	-	-	-

Attached Files

There are no attachments.

2.2 Analyzing progress (2017-2018):**For Thesis Option**

- 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 100% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-3 was satisfied.

For Non-Thesis Option

- 100% of the students completed their design-based courses successfully in Fall-2017 and Spring-2018.
- LO-3 was satisfied.

Attached Files

There are no attachments.

2.3 Criteria met? (2017-2018)*:*2.1 Reporting Data 2018-2019:****For Thesis Option**

	Fall-2018		Spring-2019	
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	4	3
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	3	1
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass
	3	2	1	0

For Non-Thesis Option

In Fall-2018 and Spring-2019, there were 25 design based courses taken by the students. There were 23 'A or B' grades, 1 'C' grade, and 1 'F' grades.

Attached Files

There are no attachments.

2.2 Analyzing Progress (2018-2019):

For Thesis Option

- 80% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 50% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-3 was partially satisfied.

For Non-Thesis Option

- 92% of the students completed their design-based courses successfully in Fall-2017 and Spring-2018.
- LO-3 was satisfied.

Attached Files

There are no attachments.

2.3 *Criteria Met? (2018-2019)*:

SECTION 3:

3.1 Action plan(s):

ACTION PLAN - 1

Action: *COMP 5100 Software Engineering course should give multiple opportunities to the students to present. The course should require at least one team presentation for the course project.*

Proposal Date: Fall-2015

Target Date: Fall-2015

Actual Date: Fall-2015

Responsible Person: Dr. Ali Sekmen

Completed: Yes

Rationale: This action item was initiated by the course instructor for COMP 5100 Software Engineering. It was discussed with the graduate faculty in the Department.

Attached Files

There are no attachments.

3.2 Documentation:

Linked Documents

There are no attachments.

Attached Files

There are no attachments.

Related Items

Supports *(Connected Up)*:

Scholarly Inquiry [Instruction]

000 Institution University Mission

Student Success and Customer Service

000 Institution TSU 2020 Strategic Plan

Supported By *(Connected Down)*:

No supported by items currently associated

AY 2018 / ASSESSMENT & IMPROVEMENT PLAN

Leadership and Team Work

This view always presents the most current state of the plan item.

Plan Item was last modified on 7/31/19, 10:32 AM

Your individual permission settings determine what fields and content are visible to you.

Template:

Student Learning Outcome (2015-2020)

Student Learning Outcome Name:

Leadership and Team Work

LO Number:

106-003.2-LO-04

Start:

7/1/2015

End:

6/30/2020

Progress:

Ongoing

Providing Department:

003 Computer Science (MS)

Responsible Roles:

Ali Sekmen (asekmen)

SECTION 1:

1. DEFINE LEARNING OUTCOME

1.1 Intended Outcome:

Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.

1.2 Criteria for Success:

For Thesis Option

(1) 75% of the students successfully defend their Thesis Proposal in first time taking COMP 5910.

(2) 75% of the students successfully defend their master Thesis in first or second time taking COMP 5920.

For Non-Thesis Option

(1) 75% of the students successfully complete their 6 credit hours of design based courses with a minimum of B grade.

Frequency/Cycle of Measurement:

Annually

1.3 Means of measurement/assessment:

The MS in Computer Science Program offers thesis and non-thesis options. The program requires completion of either a 6-credit hour thesis (Master Thesis-I and Master Thesis-II), for the thesis option, or 6 credit hours of design-based courses, for the non-thesis option, in addition to 27 credit hours of concentration-specific coursework.

For thesis option, a thesis manuscript and an oral presentation are required to document the student's research activity. A thesis committee supervises the student's thesis work. In Master Thesis-I, the student is required to provide an oral presentation (of Thesis Proposal) to the committee. In Master Thesis-II, the student is required to provide a Master Thesis Manuscript that includes

comprehensive analysis, development, and verification of a computing system, COMP 5920 Master Thesis II requires completion of Master Thesis and its successful oral defense. Therefore, Thesis Proposal Defense (with oral presentation), and Master Thesis Defense (with oral presentation) are used as means of measurement/assessment.

For non-thesis option, the student is required to take a minimum of 6 credit hours of design-based courses from a pool of courses determined by the Computer Science Graduate Faculty. Each design-based course requires a team-based class project with problem analysis, identification of solution, system design, and verification. Therefore, design-based coursework are used as means of measurement/assessment.

Attached Files

There are no attachments.

SECTION 2:

REPORT RESULTS

2.1 Reporting data (2015-2016):

For Thesis Option

	Spring-2015		Fall-2015		Spring-2016	
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	3	3	2	2
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass	1 st Attempt	Pass
	-	-	1	0	3	1
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass	2 nd Attempt	Pass
	-	-	1	1	1	1

For Non-Thesis Option

In Fall-2015 and Spring-2016, there were 17 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

Attached Files

There are no attachments.

2.2 Analyzing progress (2015-2016):

For Thesis Option

- 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 100% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-4 was satisfied.

For Non-Thesis Option

- 100% of the students completed their design-based courses successfully in Fall-2015 and Spring-2016.
- LO-4 was satisfied.

2.3 *Criteria met? (2015-2016)*:

MET,

2.1 Reporting data (2016-2017):

For Non-Thesis Option

In Fall-2016 and Spring-2017, there were 13 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

For Thesis Option

	Fall-2016		Spring-2017	
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	1	1
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	1	1
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass
	2	1	2	1

Attached Files

There are no attachments.

2.2 Analyzing progress (2016-2017):

For Thesis Option

- 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 66.7% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-4 was partially satisfied.

For Non-Thesis Option

- 100% of the students completed their design-based courses successfully in Fall-2016 and Spring-2017.
- LO-4 was satisfied.

Attached Files

There are no attachments.

2.3 *Criteria met? (2016-2017)*:

MET,

2.1 Reporting Data (2017-2018):

For Non-Thesis Option

In Fall-2017 and Spring-2018, there were 20 students taking 3-credit design based courses. All of the students passed their courses with either B or A grades.

For Thesis Option

	Fall-2017		Spring-2018	
Thesis Proposal Defense	1 st Attempt	Pass	1 st Attempt	Pass
	3	3	4	4
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	3	-
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass
	-	-	-	-

Attached Files

There are no attachments.

2.2 Analyzing progress (2017-2018):

For Thesis Option

- 100% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 100% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-4 was satisfied.

For Non-Thesis Option

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- LO-4 was satisfied.

Attached Files

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2.3 Criteria met? (2017-2018):

MET,

2.1 Reporting Data 2018-2019:

For Thesis Option

	Fall-2018		Spring-2019	
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	1	1	4	3
Master Thesis Defense	1 st Attempt	Pass	1 st Attempt	Pass
	1	1	3	1
Master Thesis Defense	2 nd Attempt	Pass	2 nd Attempt	Pass
	3	2	1	0

For Non-Thesis Option

In Fall-2018 and Spring-2019, there were 25 design based courses taken by the students. There were 23 'A or B' grades, 1 'C' grade, and 1 'F' grades.

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There are no attachments.

2.2 Analyzing Progress (2018-2019):

For Thesis Option

- 80% of the students successfully defended their Thesis Proposals in the first semester of taking COMP 5910 Master Thesis I course.
- 50% of the students successfully defended their Master Thesis in the first two semesters of taking COMP 5920 Master Thesis II course.
- LO-4 was partially satisfied.

For Non-Thesis Option

- 92% of the students completed their design-based courses successfully in Fall-2017 and Spring-2018.
- LO-4 was satisfied.

Attached Files

There are no attachments.

2.3 *Criteria Met? (2018-2019)*:

MET,

SECTION 3:

PLAN FOR IMPROVEMENT

3.1 Action plan(s):

ACTION PLAN - 1

Action: *COMP 5100 Software Engineering course should give multiple opportunities to the students to present. The course should require at least one team presentation for the course project.*

Proposal Date: Fall-2015

Target Date: Fall-2015

Actual Date: Fall-2015

Responsible Person: Dr. Ali Sekmen

Completed: Yes

Rationale: This action item was initiated by the course instructor for COMP 5100 Software Engineering. It was discussed with the graduate faculty in the Department.

ACTION PLAN - 2

Action: *Develop master thesis ideas with industry partners and advise students jointly with industry partners such as Bank of America.*

Proposal Date: Fall-2015

Target Date: Fall-2017

Actual Date: N/A

Responsible Person: Dr. Ali Sekmen and Dr. Tamara Rogers

Completed: No (This action was completed for the BS in CS Program, but it is still in progress for the MS in CS Program).

Rationale: Many faculty members expressed that our students should have state-of-the-art computer programming approach that may have direct real-life industry association. The entire faculty in the Department had extensive discussion of the Bank of America partnership to develop real-life master theses in partnership with the Bank.

Attached Files

There are no attachments.

3.2 Documentation:

Linked Documents

There are no attachments.

Attached Files

There are no attachments.

Related Items

Supports (*Connected Up*):

Scholarly Inquiry [Instruction]

000 Institution University Mission

Student Success and Customer Service

000 Institution TSU 2020 Strategic Plan

Supported By (*Connected Down*):

No supported by items currently associated

Documentation of Changes Made Seeking Improvement



College of Engineering

Department of Computer Science

October 09, 2017

Graduate Faculty Meeting Minutes

Present: Doctors; Sekmen, Al Nasr, Chen, Erdemir, Rogers, Yao,

Next meeting: TBA

Meeting Agenda

The meeting was called to order at 3:10pm.

1. All faculties agreed to remove the COMP 4100 (OS) and COMP 3310 (Data Communication) from the requirements of admission for our graduate program.
2. Dr. Sekmen asked the faculty to send him the topics to be covered in the new class ENCS 6010 (Adv. Applied Math.) by Wednesday 10/11/2017.
3. Dr. Al Nasr will follow up with the student about taking an elective from courses outside the program of study without approval. A meeting with the new and current students was suggested.
4. Faculty members have agreed on the accelerated B.Sc.-M.Sc. program. Dr. Al Nasr will prepare the proposal of the tentative program. A separate meeting will be used to discuss the proposal. Tentatively, the students will be asked to take 3 classes (double-counting) toward their M.Sc. degree. Faculty suggested that the students should be free to choose from the graduate classes with no prerequisites.