

BACHELOR OF SCIENCE IN COMPUTER SOFTWARE TECHNOLOGY ANNUAL ASSESSMENT PLAN & FINDINGS 2020-2021 ACADEMIC YEAR

2019 – 2020 CURRICULUM MAP

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8
	Apply knowledge of mathematics , computing, and scientific methods to system components and process development that meet requirement constraints in the software application domain.	Employ professionalism, ethics, and social responsibility values related to computer software technology tasks and projects.	Identify the software requirements that meet stakeholders' specifications and concerns by selecting the appropriate requirements and elicitation techniques.	Use proven techniques and patterns to design software structure before it is implemented.	Utilize values, skills, and critical thinking throughout computer software engineering decision making processes.	Apply established verification and validation techniques with well-defined objectives and targets to ensure that the software is meeting its stakeholders' specifications and deliverables.	Communicate complex software engineering concepts in a multidisciplinary team using a variety of formats.	Integrate modern knowledge, techniques, programming and management skills to develop and deliver reliable and complex software in a cost-effective manner.
<i>MAT 232: Statistical Literacy</i>	I			I	I	I	I	
<i>ECO 203: Principles of Macroeconomics</i>	R	I			R		R	I
<i>ENG 328: Scientific and Technical Writing</i>	R		R	R			R	R
<i>INT 100: Fundamentals of Information Technology & Literacy</i>	R	R	I	R	R	R	R	R
<i>CPT 200: Fundamentals of Programming Languages</i>	R	R	R		R	R		R
<i>CPT 301: Computer Organization & Architecture</i>	R							
<i>CPT 304: Operating Systems Theory & Design</i>	R							

<i>CPT 307: Data, Structures, Algorithms, and Design</i>	R	R			R			R
<i>INT 301: Computer Networking</i>	R				R			R
<i>CPT 310: Database Systems & Management</i>	R		R		R			R
<i>CYB 300: System Administration and Security</i>	R	R			R			
<i>CST 301: Software Technology and Design</i>	R	R	R	R	R	R	R	R
<i>TMG 300: Scrum Basics</i>	R				R		R	R
<i>CST 304: Software Requirements and Analysis</i>	R		R				R	R
<i>CST 307: Software Architecture and Design</i>	R			R	R		R	R
<i>CST 310: Software Development</i>	R		R		R			R
<i>CST 313: Software Testing</i>	R				R	R		R
<i>CST 316: Information Security Management</i>	R	R			R			R
<i>CRJ 499: Capstone for Computer Software Technology</i>	M	M	M	M	M	M	M	M

I (Introduced), R (Reinforced), or M (Mastered).

ANNUAL ASSESSMENT PLAN FINDINGS					
PLO 1 - Apply knowledge of mathematics, computing, and scientific methods to system components and process development that meet requirement constraints in the software application domain.					
MEASURE	ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS OBSERVED	ASSESSMENT RESULTS: PERCENTAGE OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	ASSESSMENT RESULTS: 1. EXCEEDS THE ACCEPTABLE TARGET 2. MEETS THE ACCEPTABLE TARGET 3. DOES NOT MEET THE ACCEPTABLE TARGET 4. INSUFFICIENT DATA
Direct Measure 1: CST 316 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a	170	182	93.41%	1. EXCEEDS THE ACCEPTABLE TARGET

	proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.				
Direct Measure 2: CST 499 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	77	105	73.33%	1. EXCEEDS THE ACCEPTABLE TARGET

PLO 2 - Employ professionalism, ethics, and social responsibility values related to computer software technology tasks and projects.

MEASURE	ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS OBSERVED	ASSESSMENT RESULTS: PERCENTAGE OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	ASSESSMENT RESULTS: 1. EXCEEDS THE ACCEPTABLE TARGET 2. MEETS THE ACCEPTABLE TARGET 3. DOES NOT MEET THE ACCEPTABLE TARGET 4. INSUFFICIENT DATA
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Direct Measure 1: CST 307 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	152	201	75.62%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CST 499 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	15	15	100.00%	1. EXCEEDS THE ACCEPTABLE TARGET

PLO 3 - Identify the software requirements that meet stakeholders' specifications and concerns by selecting the appropriate requirements and elicitation techniques.

MEASURE	ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS OBSERVED	ASSESSMENT RESULTS: PERCENTAGE OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	ASSESSMENT RESULTS: 1. EXCEEDS THE ACCEPTABLE TARGET 2. MEETS THE ACCEPTABLE TARGET 3. DOES NOT MEET THE ACCEPTABLE TARGET
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4. INSUFFICIENT DATA					
Direct Measure 1: CST 310 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	90	90	100.00%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CST 499 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	77	105	73.33%	1. EXCEEDS THE ACCEPTABLE TARGET
PLO 4 - Use proven techniques and patterns to design software structure before it is implemented.					
MEASURE	ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS OBSERVED	ASSESSMENT RESULTS: PERCENTAGE OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	1. EXCEEDS THE ACCEPTABLE TARGET 2. MEETS THE ACCEPTABLE TARGET 3. DOES NOT MEET THE ACCEPTABLE TARGET

PLO 5 - Utilize values, skills, and critical thinking throughout computer software engineering decision making processes.					
MEASURE	ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS OBSERVED	ASSESSMENT RESULTS: PERCENTAGE OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	ASSESSMENT RESULTS: 1. EXCEEDS THE ACCEPTABLE TARGET 2. MEETS THE ACCEPTABLE TARGET
Direct Measure 1: CST 307 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	156	202	77.23%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CST 499 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	15	15	100.00%	1. EXCEEDS THE ACCEPTABLE TARGET
					4. INSUFFICIENT DATA

					<p>3. DOES NOT MEET THE ACCEPTABLE TARGET</p> <p>4. INSUFFICIENT DATA</p>
Direct Measure 1: CST 316 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	24	26	92.31%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CST 499 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	62	90	68.89%	3. DOES NOT MEET THE ACCEPTABLE TARGET
<p>PLO 6 - Apply established verification and validation techniques with well-defined objectives and targets to ensure that the software is meeting its stakeholders' specifications and deliverables.</p>					
MEASURE	ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS OBSERVED	ASSESSMENT RESULTS: PERCENTAGE OF STUDENT RECORDS MEETING	ASSESSMENT RESULTS: 1. EXCEEDS THE ACCEPTABLE TARGET

				ACCEPTABLE TARGET	2. MEETS THE ACCEPTABLE TARGET 3. DOES NOT MEET THE ACCEPTABLE TARGET 4. INSUFFICIENT DATA
Direct Measure 1: CST 313 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	56	66	84.85%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CST 499 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	77	105	73.33%	1. EXCEEDS THE ACCEPTABLE TARGET
PLO 7 - Communicate complex software engineering concepts in a multidisciplinary team using a variety of formats.					
MEASURE	ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS MEETING	TOTAL NUMBER OF STUDENT	ASSESSMENT RESULTS:	ASSESSMENT RESULTS:

		ACCEPTABLE TARGET	RECORDS OBSERVED	PERCENTAGE OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	1. EXCEEDS THE ACCEPTABLE TARGET 2. MEETS THE ACCEPTABLE TARGET 3. DOES NOT MEET THE ACCEPTABLE TARGET 4. INSUFFICIENT DATA
Direct Measure 1: CST 307 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	148	203	72.91%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CST 499 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	77	105	73.33%	1. EXCEEDS THE ACCEPTABLE TARGET
PLO 8 - Integrate modern knowledge, techniques, programming and management skills to develop and deliver reliable and complex software in a cost-effective manner.					

MEASURE	ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	TOTAL NUMBER OF STUDENT RECORDS OBSERVED	ASSESSMENT RESULTS: PERCENTAGE OF STUDENT RECORDS MEETING ACCEPTABLE TARGET	ASSESSMENT RESULTS: 1. EXCEEDS THE ACCEPTABLE TARGET 2. MEETS THE ACCEPTABLE TARGET 3. DOES NOT MEET THE ACCEPTABLE TARGET 4. INSUFFICIENT DATA
Direct Measure 1: CST 310 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	179	180	99.44%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CST 499 Final Project	70% of Bachelor of Science in Computer Software Technology students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	15	15	100.00%	1. EXCEEDS THE ACCEPTABLE TARGET

OVERALL RECOMMENDATIONS					
<p><i>Overall, it is recommended to review the assessment plans (including measures used, alignment mapping, and targets set) and curriculum map in preparation for the 2021-2022 assessment cycle. This will determine the appropriateness of the assignments and mapping for each PLO. In addition, consider reviewing CST 499 as the acceptable target for PLO 5 was not met.</i></p>					

ANNUAL ASSESSMENT PLAN ACTION ITEM STATUS REPORT				
OUTCOME	MEASURE	KEY/RESPONSIBLE PERSONNEL	STATUS	ANTICIPATED DATE OF COMPLETION
<i>PLO1</i>	<i>CST 499 Final Project</i>	<i>Program Lead, Core Faculty, Associate Faculty, Assessment</i>	<i>Not started</i>	<i>6 Months</i>
<i>Action Details</i>	<i>Work with Assessment to conduct rubric norming to ensure faculty are accurately grading and assessing the final project.</i>			
OUTCOME	MEASURE	KEY/RESPONSIBLE PERSONNEL	STATUS	ANTICIPATED DATE OF COMPLETION
<i>PLO2</i>	<i>CST 307 Final Project</i>	<i>Program Lead, Core Faculty, Associate Faculty, Assessment</i>	<i>Not started</i>	<i>6 Months</i>
<i>Action Details</i>	<i>Work with Assessment to conduct rubric norming to ensure faculty are accurately grading and assessing the final project.</i>			
OUTCOME	MEASURE	KEY/RESPONSIBLE PERSONNEL	STATUS	ANTICIPATED DATE OF COMPLETION
<i>PLO5</i>	<i>CST 316 Final Project</i>	<i>Program Lead, Core Faculty, Associate Faculty, Assessment</i>	<i>Not started</i>	<i>6 Months</i>

<i>Action Details</i>	<i>Work with Assessment to conduct rubric norming to ensure faculty are accurately grading and assessing the final project.</i>			
OUTCOME	MEASURE	KEY/RESPONSIBLE PERSONNEL	STATUS	ANTICIPATED DATE OF COMPLETION
<i>PLO6</i>	<i>CST 313 Final Project</i>	<i>Program Lead, Core Faculty, Associate Faculty, Assessment</i>	<i>Not started</i>	<i>6 Months</i>
<i>Action Details</i>	<i>Work with Assessment to conduct rubric norming to ensure faculty are accurately grading and assessing the final project.</i>			

1) Action Item One

- a. What is the proposed action? *Ensure faculty are accurately grading and assessing the final assignment.*
- b. What learning outcome is the action tied to? *PLO1*
- c. What is the measure associated with this action? *CST 499 Final Project*
- d. Who should be involved in implementing the proposed action? *Amr Elchouemi, Amjad Alkilani*
- e. What is the status of the proposed action? *Not Started*
- f. What is the estimated timeframe for completion of this action? *6 months.*

2) Action Item Two

- a. What is the proposed action? *Ensure faculty are accurately grading and assessing the final assignment.*
- b. What learning outcome is the action tied to? *PLO2*
- c. What is the measure associated with this action? *CST 307 Final Project*
- d. Who should be involved in implementing the proposed action? *Amr Elchouemi, Amjad Alkilani*

- g. What is the status of the proposed action? *Not Started*
- e. What is the estimated timeframe for completion of this action? *6 months.*

3) Action Item Three

- a. What is the proposed action? *Ensure faculty are accurately grading and assessing the final assignment.*
- b. What learning outcome is the action tied to? *PLO5*
- c. What is the measure associated with this action? *CST 316 Final Project*
- d. Who should be involved in implementing the proposed action? *Gregory Denlea, Amr Elchouemi, Amjad Alkilani*
- h. What is the status of the proposed action? *Not Started*
- e. What is the estimated timeframe for completion of this action? *6 months.*

4) Action Item Four

- a. What is the proposed action? *Ensure faculty are accurately grading and assessing the final assignment.*
- b. What learning outcome is the action tied to? *PLO6*
- c. What is the measure associated with this action? *CST 313 Final Project*
- d. Who should be involved in implementing the proposed action? *Robert Key, Amr Elchouemi, Amjad Alkilani*
- i. What is the status of the proposed action? *Not Started*
- e. What is the estimated timeframe for completion of this action? *6 months.*