BACHELOR OF SCIENCE IN COMPUTER SOFTWARE TECHNOLOGY ANNUAL ASSESSMENT PLAN & FINDINGS 2022-2023 ACADEMIC YEAR

2022 – 2023 CURRICULUM MAP

	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.	PLO 2 — Employ professionalism, ethics, and social responsibility values related to computer software technology tasks and projects.	PLO 3 — Identify the software requirements that meet stakeholders', specifications and concerns by selecting the appropriate requirements and elicitation techniques.	PLO 4 — Use proven techniques and patterns to design software structure before it is implemented.	PLO 5 — Utilize values, skills, and critical thinking throughout computer software engineering decision making processes.	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.	PLO 7 — Communicate complex software engineering concepts in a multidisciplinary team using a variety of formats.	PLO 8 — Integrate modern knowledge, techniques, programming and management skills to develop and deliver reliable and complex software in a cost-effective manner.
MAT 232: Statistical Literacy	I			I	I	I	I	
ECO 203: Principles of Macroeconomics	R	I			R		R	I
ENG 328: Scientific and Technical Writing	R		R	R			R	R
TEC 101: Fundamentals of Information Technology & Literacy	R	R	I	R	R	R	R	R
CPT 200: Fundamentals of Programming Languages	R	R	R		R	R		R
CPT 301: Computer Organization & Architecture	R							
CPT 304: Operating Systems Theory & Design	R							

Course	1	2	3	4	5	6	7	8
CPT 307: Data, Structures, Algorithms, and Design	R	R			R			R
INT 301: Computer Networking	R				R			R
CPT 310: Database Systems & Management	R		R		R			R
CYB 300: System Administration and Security	R	R			R			
CST 301: Software Technology and Design	R	R	R	R	R	R	R	R
TMG 300: Scrum Basics	R				R		R	R
CST 304: Software Requirements and Analysis	R		R				R	R
CST 307: Software Architecture and Design	R	R		R	R		R	R
CST 310: Software Development	R		R		R			R
CST 313: Software Testing	R				R	R		R
CST 316: Information Security Management	R	R			R			R
CST 499: Capstone for Computer Software Technology	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	332	379	87.6%	1. EXCEEDS THE ACCEPTABLE TARGET

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
	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.	98	118	78.8%	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

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.	261	292	89.4%	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	17	88.2%	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

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	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.	170	174	97.7%	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.	93	118	78.8%	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

					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.	254	290	87.6%	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	17	88.2%	1. EXCEEDS 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

					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 proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	48	54	88.9%	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.	78	101	77.2%	1. EXCEEDS THE ACCEPTABLE TARGET

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.

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.	100	112	89.3%	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.	93	118	78.8%	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.	250	288	86.8%	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.	93	118	78.8%	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.	337	348	96.8%	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	17	88.2%	1. EXCEEDS THE ACCEPTABLE TARGET

OVERALL RECOMMENDATIONS
Overall, it is recommended to review the assessment plan (including measures used, alignment mapping, and targets set) and the curriculum map in preparation for the 2023-24 assessment cycle. This will determine the appropriateness of the assignments and mapping for each PLO. In addition, consider reviewing other course assignments to use as additional measures to assess.

ANNUAL ASSESSMENT PLAN ACTION ITEM STATUS REPORT				
OUTCOME	**MEASURE**	**KEY/RESPONSIBLE PERSONNEL**	**STATUS**	**ANTICIPATED DATE OF COMPLETION**
all	*all*	*Lead Faculty*	*Not Started*	*23-24AY*
Action Details	Review curriculum map to ensure proper alignment and scaffolding for all PLOs is still taking place accurately.			
OUTCOME	**MEASURE**	**KEY/RESPONSIBLE PERSONNEL**	**STATUS**	**ANTICIPATED DATE OF COMPLETION**
1, 2, 3, 6, 7	*Indirect Measures*	*Lead Faculty and Assessment*	*In Progress*	*23-24AY*
Action Details	Add End of Course Survey results as indirect measures to the following PLOs.			
OUTCOME	**MEASURE**	**KEY/RESPONSIBLE PERSONNEL**	**STATUS**	**ANTICIPATED DATE OF COMPLETION**
all	*all*	*Lead, Core, and Associate Faculty and Assessment*	*Not Started*	*23-24AY*
Action Details	Complete Rubric norming for INT 301 to determine ways to increase student performance and incorporate an assignment as an additional measure. (Understanding of LAN network, distribution layer backbone, VLAN, and WAN Concepts - Accuracy in explaining concepts of networking and data communication as they relate to this			

assignment - Application of knowledge and the ability of selecting the right communication technology for the postposed problem.)

OUTCOME	MEASURE	KEY/RESPONSIBLE PERSONNEL	STATUS	ANTICIPATED DATE OF COMPLETION
1-8	*CST 499*	*Lead, Core, and Associate Faculty and Assessment*	*Not Started*	*23-24AY*

Action Details	Rubric norming for CST 499 to determine ways to increase student performance. (Understanding the various stages of software development lifecycle to build repost applications - Accuracy in developing SRS document & UML Design Model - Application of Knowledge and the ability to build Landing, Login, and Enrollment Pages.)

OUTCOME	MEASURE	KEY/RESPONSIBLE PERSONNEL	STATUS	ANTICIPATED DATE OF COMPLETION
all	*all*	*Lead Faculty, Assessment*	*Not Started*	*23-24 AY*

Action Details	Consider aligning TEC 100 (a General Education course) to the PLOs, incorporating into the program curriculum map, and possibly adding assignment(s) as additional measures to support PLO achievement. Many components of the recently redeveloped course align with the Technology department's bachelor programs.