BACHELOR OF SCIENCE IN CYBER & DATA SECURITY TECHNOLOGY ANNUAL ASSESSMENT PLAN & FINDINGS
2022-2023 ACADEMIC YEAR

2022 – 2023 CURRICULUM MAP

	PLO 1 — Employ knowledge of Penetration testing while ensuring a strict professional, ethical, and social responsibility related to cyber and data security technology professions.	PLO 2 — Discuss appropriate mobile and web application security tools used in the world of information security as they apply to the seven domains of the typical information technology infrastructure.	PLO 3 — Develop a risk management plan based upon the classification of the seven domains of the typical information technology infrastructure.	PLO 4 — Apply the process of securing databases, hardening security for users, hardware, and software while constructing appropriate countermeasures to ensure data integrity.	PLO 5 — Construct security counter measures using ethical hacking tools for hardware, software, wired, and wireless technology.	PLO 6 — Evaluate local and global impact of attacks through information gathering such as enumeration, vulnerability scanning, and network reconnaissance, exploitation on individuals, organizations, and society.	PLO 7 — Prepare appropriate solutions for business continuity to minimize the impact of a disruption or disaster to lessen the impact by utilizing security management support protocols, best practices, and necessary security tools.
TEC 101: Fundamentals of Information Technology & Literacy	I	I	I	I		I	I
CYB101: Defensive Network Reconnaissance	R	R	R	R		R	R
ECO 203: Principles of Macroeconomics	I				I	I	
CYB 102: Network Penetration Testing-Breaching Defenses	R	R	R	R	I	R	R
CPT 200: Fundamentals of Programming Languages	R	R		R	R		
CYB 200: Database Security-Defense in Depth				R	R	R	

MAT 232: Statistical Literacy							I
CYB 201: Beginning White Hat Ethical Hacker	R	R	R	R	R		
INT 301: Computer Networking	R	R	R	R	R	R	
CYB 300: System Administration and Security	R	R	R	R	R	R	R
CYB301: Introduction to Cyber & Data Security Technology	R	R	R	R	R	R	R
CYB 302: Secure Web Applications and Social Networking	R		R	R	R	R	R
CYB 303: Advanced White Hat Ethical Hacker	R	R	R	R	R	R	
CYB 304: Security Information Systems Security Manager				R	R	R	R
ENG 328: Scientific & Technical Writing							R
CYB 400: Cryptography			R	R	R	R	
CYB 401: Risk Management and Infrastructure	R	R	R	R	R	R	R
CYB 402: Computer Forensics	R		R	R	R	R	R
CYB 499: Capstone for Cyber & Data Security Technology	M		M	M	M	M	M

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

ANNUAL ASSESSMENT PLAN FINDINGS					
PLO 1 - Employ knowledge of Penetration testing while ensuring a strict professional, ethical, and social responsibility related to cyber and data security technology professions.					
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: CYB 402 Final Paper	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or	93	124	72.7%	2. MEETS THE ACCEPTABLE TARGET

	distinguished evaluation on relevant content criteria mapped to this PLO.				
Direct Measure 2: CYB 499 Final Project	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	35	42	83.3%	1. EXCEEDS THE ACCEPTABLE TARGET

PLO 2 - Discuss appropriate mobile and web application security tools used in the world of information security as they apply to the seven domains of the typical information technology infrastructure.

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: CYB 301 Week 1 Assignment	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	443	545	81.3%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CYB 401 Final Paper	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	373	416	89.7%	1. EXCEEDS THE ACCEPTABLE TARGET

PLO 3 - Develop a risk management plan based upon the classification of the seven domains of the typical information technology infrastructure.

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: CYB 401 Final Paper	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	373	416	89.7%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CYB 499 Final Project	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	35	42	83.3%	1. EXCEEDS THE ACCEPTABLE TARGET

PLO 4 - Apply the process of securing databases, hardening security for users, hardware, and software while constructing appropriate countermeasures to ensure data integrity.

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 2. MEETS THE ACCEPTABLE TARGET

				ACCEPTABLE TARGET	3. DOES NOT MEET THE ACCEPTABLE TARGET 4. INSUFFICIENT DATA
Direct Measure 1: CYB 402 Week 4 Assignment	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	64	74	84.2%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CYB 499 Final Project	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	35	42	83.3%	1. EXCEEDS THE ACCEPTABLE TARGET
PLO 5 - Construct security counter measures using ethical hacking tools for hardware, software, wired, and wireless technology.					
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: CYB 402 Final Paper	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	139	186	72.4%	2. MEETS THE ACCEPTABLE TARGET
Direct Measure 2: CYB 499 Final Project	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	35	42	83.3%	1. EXCEEDS THE ACCEPTABLE TARGET
PLO 6 - Evaluate local and global impact of attacks through information gathering such as enumeration, vulnerability scanning, and network reconnaissance, exploitation on individuals, organizations, and society.					
MEASURE	**ACCEPTABLE TARGET**	**TOTAL NUMBER OF STUDENT RECORDS**	**TOTAL NUMBER OF STUDENT**	**ASSESSMENT RESULTS:**	**ASSESSMENT RESULTS:**

		MEETING 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: CYB 401 Final Project	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	373	416	89.7%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CYB 499 Final Project	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	35	42	83.3%	1. EXCEEDS THE ACCEPTABLE TARGET
PLO 7 - Prepare appropriate solutions for business continuity to minimize the impact of a disruption or disaster to lessen the impact by utilizing security management support protocols, best practices, and necessary security tools.					

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: CYB 300 Week Five Learning Activity	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	497	560	88.8%	1. EXCEEDS THE ACCEPTABLE TARGET
Direct Measure 2: CYB 499 Final Project	70% of Bachelor of Science Cyber and Data Security students must receive a proficient, or distinguished evaluation on relevant content criteria mapped to this PLO.	35	42	83.3%	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. It is recommended to review other course assignments to use as additional measures to assess. Also, consider reviewing the newly developed CYB402 as more students complete the course.

ANNUAL ASSESSMENT PLAN ACTION ITEM STATUS REPORT				
OUTCOME	MEASURE	KEY/RESPONSIBLE PERSONNEL	STATUS	ANTICIPATED DATE OF COMPLETION
all	*all*	*Lead Faculty, Assessment*	*Not Started*	*23-24 AY*
Action Details	*Review the curriculum map alignment with the latest course developments. Analyze course data from the course to incorporate new measures and evaluate student performance.*			
OUTCOME	MEASURE	KEY/RESPONSIBLE PERSONNEL	STATUS	ANTICIPATED DATE OF COMPLETION
1, 4, 5	*CYB 402*	*Lead Faculty, Assessment*	*Started*	*23-24 AY*
Action Details	*Redevelop CYB 402 and review data to determine what are the best measures to align.*			
OUTCOME	MEASURE	KEY/RESPONSIBLE PERSONNEL	STATUS	ANTICIPATED DATE OF COMPLETION
2	*CYB 301*	*Lead Faculty, Assessment*	*Started*	*23-24 AY*

Action Details	Redevelop CYB 301 and CYB 302. Consider adding CYB 302 as a measure to replace CYB 301.				
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.				