2022-23 ACADEMIC PROGRAMS

2022-2023 AUTOMOTIVE CYBERSECURITY (CTACYB)

Description

This certificate program is designed to meet the emerging demand for highly skilled automotive cybersecurity professionals. In this certificate program, students are introduced to the skills and strategies needed to test security related to automobile networks and related infrastructure. Students will work with the various automobile networks (CAN, LIN, Ethernet, and FlexRay) and explore protocols and messages produced by the vehicle that could be vulnerable to attacks. Students will consider risk mitigation technologies including authentication, encryption and firewall technologies. Learners in this program acquire the following skills: Learn basic networking concepts including V2V, V2I and V2X communication; Understand common security terms and concepts and how they relate to automobiles in both a technical and compliance nature; Understand relevant vehicle technologies including ECU's (Electronic control unit) and basic electrical theory; Read and write basic computer programs and scripts; Develop process and procedures for testing the security of a vehicle's information network; Practice reverse engineering techniques for testing security.

Course Requirements

Major/Area Requirements

Class	Title	Minimum Credits
ASV 131	Automotive Electrical	4
CPS 120	Introduction to Computer Science	3
CST 185	Local and Mobile Networking Essentials	4
CSS 200	Introduction to Network Security - Security+	4
CSS 285	Essentials of Automotive Penetration Testing	4
Total		19

Total Credits Required: 19

Accurate as of 02/22/2023 Information is subject to change without notice.