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# Carlson Cybersecurity (Automotive Emphasis)



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*This program offers excellent  
career opportunities for both  
male and female students.*

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## Credits, Articulations & Prerequisites

### Credits:

Cross credit with some academic courses (including 4<sup>th</sup> year related math, VPAA, math & science) may be available and will be reviewed on a case-by-case basis with each district's counseling department.

### Dual Enrollment:

- Henry Ford College – up to 28 credit hours
- Credential awarded upon successful completion of program

### Prerequisites:

- Junior status and on track for graduation
- GPA of 2.0 or higher in core classes
- Program application required before acceptance

## Program Description

The courses offer a mid-level understanding of the technological needs, threats, and vulnerabilities of hardware, software, operating systems, networks and the Internet. Students will examine operating systems, networks, tools and protocols needed to navigate, use, and manage security technologies as well as gain insight into the legal, social, and political dynamics of the cyber universe. Designed for students interested in cyber defense or IT professionals seeking a fundamental understanding of cybersecurity.

Students will learn to write UNIX shell scripts and manipulate the UNIX operating system, along with an introduction to other language. They will recognize networks, operating systems and analyze the security requirements for cybersecurity. Additionally, they will learn to defend systems against unauthorized access using various tools (KALI, NMAP, SNORT, Wireshark, etc.) and learn to restrict access through privilege assignment, and control structures.

Attendance history must meet the standard of the sending school district and additional prerequisites may be required by Henry Ford College

## Special Features

In cooperation with Henry Ford College, the successful Cybersecurity student will finish high school having completed up to 28 hours of **free** undergraduate credit. Should a student choose, they can complete their Associate's Degree at HFC while they are working in their career field.

Leadership and work-based learning opportunities available.

Students will meet at the Michigan Technical Education Center of Henry Ford College located at 3601 Schaefer Road, Dearborn, MI

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#### STATEMENT OF COMPLIANCE

The Downriver Career Technical Consortium complies with all federal laws and regulations of the U.S. Department of Education. It is the policy of the Downriver Career Technical Consortium that no person on the basis of race, color, religion, national origin or ancestry, age, gender, marital status, disability or limited English proficiency shall be discriminated against or excluded from participation in any program or activity to which it is responsible or for which it receives financial assistance from the U.S. Department of Education. Furthermore, the consortium will encourage participation by all of the above.

Adopted by the Downriver Career Technical Consortium  
November 23, 1982