WARREN

Warren Woods Tower Offers Two New Career Technical Education Classes in Computer Science

By Jewel Jhons
WWT Senior

Warren Woods Tower High School (WWT) recently enhanced their course offerings in the Information Technology career pathway by adding a new Career Technical Education (CTE) course in Computer Programming. This is a very welcome addition as technology has never been more important in our lives!

Computer Programming is now one of many CTE programs offered at Warren Woods Tower. CTE classes offer a curriculum that allow students the opportunity to gain the knowledge and practical skills needed to better prepare them for their post-secondary options in this ever-changing technological world. Thus, CTE students receive fluid and inclusive industry instruction along with current and relative hands-on learning experiences. Currently, there are two classes offered in the program, Computer Programming and Advanced Placement Computer Science Principles. The Computer Programming course encourages student to learn the basics of computer science and computer languages while completing fun tasks such as creating web games and animations. It provides students a strong foundation for understanding computer programming. Advanced Placement Computer Science Principles (APCSP) is a year-long college-level course that offers students the opportunity to earn college credit upon passing a national exam at the end course. This is a rigorous course that builds on the fundamentals of computing including problem solving, working with data, understanding the internet, cybersecurity, and programming.

Many of our CTE programs have been affected by COVID-19. It has been a challenge for students to receive hands-on experiences when they are taught remotely. WWT instructor, Mr. Dembinski, considers the Computer Programming classes at WWT to be the least affected by COVID-19. He shares, "The majority of the work these classes require are online which lends itself to a virtual environment." By using websites such as Code.org and CodeHS.com, many assignments can be done independently or with minimal guidance from Mr. Dembinski. Students are able to work hands-on by coding on these given websites and building programs themselves or with classmates (virtually or face-to-face). The Computer Programming classes are centered around the technology that provides remote learning and makes remote learning possible. We are actually learning via the format we are learning about! Further, it has allowed students the ability to learn from the safety of their own homes.

CTE programs must connect students to the business world. All CTE programs include a Program Advisory Committee that is comprised of relevant business partners, educators, students, and parents. The members meet formally, twice a year, but support the program throughout the year. The purpose of the Committee is to remain connected and current with the business world, to maintain a successful program, and to promote appropriate developments to the program. WWT is fortunate to have several business partners that support the program, including John Laswell from Sehi Computers and Mike Fortenberry from Extreme Networks. For example, last year, Sehi Computers welcomed computer programming classes at WWT to their facility to view and experience new technology such as 3D printers and virtual reality. Former WWT students, Adam McNeilly and Jeffery Quesnelle, are currently working as computer programmers and are also members of the advisory committee. The members provide on-going knowledge regarding advice on skills companies may be looking for, industry certifications that may become essential, and advice on the curriculum. Mr. Dembinski is looking to further such opportunities for his students by expanding the advisory committee and gaining new resources for students. He is hopeful that with the online learning format he can connect with the advisory committee members to host events like Q&A sessions via Zoom and other types of mentoring to further support and connect computer science students.

The Computer Programming class also connects with post-secondary learning institutions. This year up to 10 WWT Computer Programming students can receive sponsorship in the AI Scholars Camp. This is an exclusive pre-college enrichment opportunity offered by Stanford Alumni and Graduate Students. The program aims to teach students how artificial intelligence can benefit our daily lives and how to apply their ideas into programming them to life. Students who are interested in the camp must apply and gain admittance. Cora Fontana, a WWT Senior, is one of the few selected for the program. Since middle school, she has been interested in the world of computers and finds it important to broaden the numbers of women in the STEM field. Fontana shares, "I'm really looking forward to learning how exactly, we as people, feed computers new information, and how it's stored to make them smarter."

Computer programming continues to be a thriving field. When it comes to the importance of coding, Mr. Dembinski believes, "Coding is a skill that is as essential as reading and writing." Students who know how to code will have many opportunities open to them in the future. Especially with technology growing and becoming a part of everyday life, in the upcoming years, there will be a high demand for high-tech jobs that need experienced people. According to The U.S. Bureau of Labor Statistics, the job outlook from 2019 to 2029 is about 15%, which is 11% more than the average projected growth rate for all jobs. In 2019, the median pay for a computer and information research scientist was about $122,840 per year which is about $59.06 per hour. Linkedin.com is a trusted website specializing in aiding employers and employees to find the right match for jobs, internships, and professional relationships. As of December 2020, Linkedin.com reported there are over 4,500 entry-level jobs that someone with a computer science degree could apply for.

The courses at WWT also develop soft skills. As a current APCSP student, I have learned not only how to program a computer but, I've also built upon my teamworking skills. Many projects assigned require students to work with others. While that is more difficult due to COVID-19 restrictions and the split of virtual and in-person students, Code.org makes it extremely easy to work with our peers from the safety of our own homes or even six feet apart! Many students in the Computer Science program recommend that their colleagues enroll in the program because of its pleasant educational aspects such as easy-going lessons and engaging tasks. Senior Hudson Mizgalski expresses, "Not only is it an enjoyable class, but the information we learn is also very useful in a world filled with technology." Even if a student does not intend to continue in the computer science path to earn a degree or a certification, they will have the knowledge and skills to be tech-savvy in this developing technological world.

WWT is fortunate to be part of the Southwest Macomb Technical Education Consortium (SMTEC). SMTEC school districts include Center Line, Fitzgerald, Van Dyke, and Warren Woods. These districts share their CTE programs. High school students from these school districts are eligible to be transported during the school day to attend a CTE class sponsored by SMTEC. Unfortunately, due to COVID-19, students from the other districts are not being transported this year due to safety reasons.

Mr. Dembinski hopes to expand the program beginning with the students. By implementing new additions to his classes, he can make the classes more enriching for the students. There are currently over 100 students enrolled in the Computer Science Program and he hopes to increase that amount next year with WWT students and students throughout SMTEC. With a growing technological world, it is vital that we have more students with the skills and knowledge to lead the way to technological growth. As we have all realized, we have become especially dependent on technology during the current global pandemic; technology has never been more important in our lives. It keeps us connected to others, it fosters education, it keeps the economy afloat, and more. We need to continue to promote more interest in computer science so that we can better evolve the technology we have to produce progressively more efficient technology for our daily lives. The computer science students of today will become the essential inventors and reformers of our future.

PHOTOS BY MACKENZIE GLASS, WWT SENIOR, AND MEGAN FINAZZO, WWT SENIOR
APCSP students, Dominic Johnson '21 and Tylor Skrzypczak '21 work together on a coding project.

While socially distanced, Computer Programming students Jake Dutz '22, Zachary McMichael '22, and Kayla Tafanelli '23 listen to classroom instruction.

Teacher, Mr. Thomas Dembinski, simultaneously teaches both in-person and virtual students

Computer Programming student Evan Garcia, '23 is one of several WWT students who are participating in the AI Scholars Camp sponsored by Stanford Alumni and Graduate Students.

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Southwest Macomb Technical Education Consortium Course Offerings

SMTEC (Southwest Macomb Technical Education Consortium) participants include Center Line, Fitzgerald, Van Dyke, and Warren Woods Public Schools offers the following courses in career & technical pathways:

ARTS & COMMUNICATIONS: Graphic Communications, Digital Media Production

BUSINESS, MANAGEMENT, MARKETING & TECHNOLOGY: Accounting/Finance, Business Management, Computer Programming/AP Computer Science Principles, Marketing & Merchandising, Sports & Entertainment Marketing

ENGINEERING, MANUFACTURING AND INDUSTRIAL TECHNOLOGY: Automotive Technology, Heavy Equipment Technology, Mechanical Drafting/CAD, Manufacturing Technology, Welding

HEALTH SCIENCES: Anatomy & Physiology for Health Careers, Dental Assistant, Emergency Medical Technician, Health Career Explorations, Medical Assistant, Medical First Responder, Medical Terminology, Nursing Assistant, Pharmacy Technician, Physical Therapy Technician

HUMAN SERVICES: Cosmetology, Culinary Services, Educational Careers Program, Firefighting, Law Enforcement, JROTC

Anchor Bay Schools
Armada Area Schools
Centerline Public Schools
Chippewa Valley Schools
Clintondale Community Schools
Eastpointe Community Schools
Fitzgerald Public Schools
Fraser Public Schools
Lake Shore Public Schools
Lakeview Public Schools
L'Anse Creuse Public Schools
Mount Clemens Community Schools
New Haven Community Schools

For more information about CTE, contact
Shannon Williams at 586.228.3488 or swilliams@misd.net

MISD

Macomb Intermediate School District
44001 Garfield Road
Clinton Township, MI 48038
586.228.3300

**For more information about
the MISD and the 21 school districts, go to**

www.misd.net

Richmond Community Schools
Romeo Community Schools
Roseville Community Schools
South Lake Community Schools
Utica Community Schools
Van Dyke Public Schools
Warren Consolidated Schools
Warren Woods Public Schools