# The Quarterly Capacitor

Wayne Local Information Technology & Engineering Newsletter

## Our First Issue | Welcome Class of 2025!

This year marks the second full-time year for the Information Technology program and the fifth for the Engineering program, both offered through a partnership with Warren County Career Center.

Waynesville Elementary may have a new building, but there are some exciting new things going on in the Career Tech Department at Waynesville High School:

The IT Program is now located directly next to the Engineering Program in the High School Media Center! Come find out more about what we have to offer at the WHS Open House on August 26th! Seats are still available in most courses! Contact an instructor or your school counselor for more information.

Let's take a moment to meet the instructors and look at the courses and opportunities being offered this year!

## DEPARTMENT INSTRUCTORS

### Mr. Otto | PLTW Instructor

Having worked in multiple industry engineering roles in multiple industries, Mr. Otto brings a wealth of engineering experience, knowledge, and passion to the classroom.

"An engineer is someone who uses *everything they know to solve problems.*" Students in the engineering classroom learn relevant engineering skills linked to solving real world problems. In addition, students get the opportunity to explore multiple STEM related career pathways based on their own interests.

✉ nik.otto@mywccc.org

# Mr. Smith | IT Instructor

With 10 years of industry Information Technology experience in Higher Education that spanned multiple states (including Ohio and California), Mr. Smith has a passion for helping people find ways to better themselves and improve the quality of their work using technology.

"Technological fluency empowers everyone and regardless of the industry you are looking to go into, is becoming increasingly necessary and permeates the professional world."

✉ joshua.smith@mywccc.org

# 2021-2022 ACADEMIC YEAR COURSE OFFERINGS

## ENGINEERING COURSES

### INTRODUCTION TO ENGINEERING DESIGN (IED)
This course solves problems using engineering design principles with CAD (computer aided design). Students will learn CAD using Autodesk Inventor and have an opportunity to complete an industry recognized credential.

### AEROSPACE ENGINEERING (AE) - Available in Honors Track
Explore the field of aerospace engineering with a dynamic combination of content and projects. This course includes instruction in over ten different types of software and includes student driven projects relating to glider design, space exploration, and rocket launching.

### DIGITAL ELECTRONICS (DE)
*New* for the 2021-22 school year, this course allows students to explore the world of *digital electronics* via multiple hands-on and simulated projects. Students will simulate and build their own circuits as well as learning how to program and wire Arduinos to solve real world problems.

### PRINCIPLES OF ENGINEERING (POT) - Available in Honors Track
For students serious about going to college for any engineering major, this is THE must take engineering course. This course has some of the most challenging content of any engineering offering including statics, electricity, robot coding, and simple machines.

### ADVANCED ENGINEERING DESIGN & ROBOTICS (ADR)
The junior/senior capstone class - ADR allows students to *try on* potential future engineering careers to assess for themselves how well their prospective future career *fits*. Students propose their own projects quarterly and work towards completing at least one industry recognized credential as well as the STEM and Career Tech honors diplomas.

## INFORMATION TECHNOLOGY COURSES

### INTRODUCTION TO INFORMATION TECHNOLOGY

This course serves as both a pathway to upper-level IT courses offered both at WHS and Warren County Career Center, but also provides students with a broad overview of popular technologies, prevalent topics and the opportunity to develop industry-agnostic technical skills.

**COMPUTER PROGRAMMING**
This course introduces students to the primary concepts and principles of software development, including programming language syntax - with a focus on learning Python 2.

**GAME DESIGN**
This course utilizes the Unity Game Engine to introduce students to the fundamentals of Video Game Development - including narrative, design and user-interface elements.

**WEB DESIGN**
This course introduces students to the fundamentals of design and introduces the basics of both HTML and CSS to design and develop interactive user experiences.

**PODCASTING & VIDEO PRODUCTION**
This course allows students to produce their own episodic series of audio (or video) digital recordings available for download by the public - students are encouraged to engage with the community and make their personality the star of the show.