


<p><b>Mark Thompson</b> Phone: 229.225.5050 mthompson@tcjackets.net</p>	<p><i><b>Embedded Computing</b></i> <b>Course Syllabus</b> Room: PREP 115 2022 - 2023</p>	
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**Career Cluster:** Information Technology  
**Pathway:** Internet of Things

**COURSE DESCRIPTION:**

The demand for programming (software development) has gone well beyond desktop computers and the web, into a ubiquitous world of personal devices, smart cars, intelligent factories, and even more. These systems interact with us directly, as well as with each other.

This course will focus on the interaction of programming and devices, using data from various sensors and sources in order to make decisions, take actions, and more. A common industry term to describe this work is Internet of Things. Students will show first-hand how programming and machines interact to accomplish common and essential tasks throughout our society.

Embedded Computing is the third course in the Internet of Things pathway. Students enrolled in this course should have successfully completed Introduction to Digital Technology and Computer Science Principles. After mastery of the standards in this course, students should be prepared to earn an industry-recognized credential in this career area.

## COURSE CURRICULUM CONTENT:

COURSE STANDARDS			
IT-EP-1	Demonstrate employability skills required by business and industry.	IT-EP-8	Interpret debugging techniques in hardware and software.
IT-EP-2	Explain Embedded Computing (EC) and the Internet of Things (IoT).	IT-EP-9	Compare, contrast, and utilize Cloud Service features.
IT-EP-3	Demonstrate a working knowledge of basic networking protocols and the internet.	IT-EP-10	Design an embedded computing application that solves a current problem (e.g., robotics, art-botics, visual art, and kinetic art).
IT-EP-4	Develop and investigate interfacing circuits.	IT-EP-11	Organize personal online career portfolio for specific career interests.
IT-EP-5	Classify and categorize multiple kinds of sensors.	IT-EP-12	Explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events.
IT-EP-6	Manipulate, connect, and examine performance aspects of motors.		
IT-EP-7	Investigate and draw connections within the context of programming as it relates to Embedded Computing/Internet of Things.		

### GRADING POLICY:

Daily Grades/In Class Assignments	20%
Tests and Quizzes	20%
Projects/Lab Work	40%
Benchmark (Final)	20%

### CLASSWORK:

Assignments are designed to be completed during class time. Classwork must be completed and submitted during class. Late work is not accepted. Making up work for excused absences is the responsibility of the student. Students should consult Google Classroom and inform the teacher to make up assignments for excused absences.

### TEXTBOOK/MATERIALS:

- Students will not be issued a textbook for this class
- Computer and online resources
- Google Classroom, an Online Learning Management System (LMS), will be used for managing assignments.
- Students should bring a writing instrument to class each day
- Interactive Notebook - provided

## **CLASSROOM RULES/CONDUCT:**

As part of the P.R.E.P. Academy, the Business and Computer Science Department focuses on professionalism, accountability, responsibility, self-discipline and similar work ethics that are expected behaviors in a business environment. Therefore, each student is expected to conduct himself/herself in a professional manner by avoiding the following infractions: (1) unnecessarily stopping the teacher from teaching, (2) hindering other students from learning, and (3) engaging in behavior that is not in the best interest of the class. To ensure that a positive learning atmosphere is maintained, the teacher will enforce the discipline procedures outlined in the *Thomas County Central High School Parent-Student Handbook*.

## **CONSEQUENCES FOR MISCONDUCT:**

- 1<sup>st</sup> Offense: Verbal Warning. Documented.
- 2<sup>nd</sup> Offense: Call Parent or Guardian. Documented.
- 3<sup>rd</sup> Offense: Teacher Detention before or after school. Documented.
- 4<sup>th</sup> Offense: Disciplinary write-up to the grade-level administrator.

## **COMPUTER USE:**

Students will be required to access the Internet daily for assignments and projects. Each student must have an Acceptable Use Policy (AUP) on file at the school. All policies in the AUP will be followed.

Students should use the internet when instructed for classroom purposes only. Students who violate the AUP will receive a discipline referral and may have their computer privileges revoked.

## **FUTURE BUSINESS LEADERS OF AMERICA (FBLA):**

FBLA is a co-curricular student organization that plays an integral part in the components of the Business & Technology course standards. FBLA activities are incorporated throughout this course and the rest of the Business and Computer Science courses. Students are strongly urged to join FBLA (\$25) to benefit from the wealth of opportunities the organization has to offer.

## **END OF PATHWAY ASSESSMENT**

Students are encouraged to select a pathway beginning in ninth grade that is connected to their college and career goals. This course is third of three courses required to complete the Internet of Things (IoT) pathway in the CTAE department. At the conclusion of the third pathway course, students will be required to take an End of Pathway Assessment. This assessment provides students an opportunity to demonstrate what they have learned by completing an on-line, nationally recognized exam. Students who complete a pathway and earn an industry credential by passing the assessment will receive a graduation cord to signify their achievement.

***Please read the following statements, print your name, sign, and fill out the information below.***

As the **student**, I have read the syllabus and understand the expectations and requirements of the course. I also agree to follow the rules in Mr. Thompson's classroom.

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**Student Printed Name**                      **Student Signature**                      **Date**

As the **Parent/Guardian**, I have read the syllabus and understand the expectations and requirements of the course. I expect my TCHS student to follow the rules in Mr. Thompson's classroom.

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**Parent/Guardian Printed Name**                      **Parent/Guardian Signature**                      **Date**

**Parent Contact Information: *Please indicate the preferred phone number.***

Home: \_\_\_\_\_ Best time to call: \_\_\_\_\_

Work: \_\_\_\_\_ Best time to call: \_\_\_\_\_

Cell: \_\_\_\_\_ Best time to call: \_\_\_\_\_

Email: \_\_\_\_\_