Super Tech II



Lake Career & Technical Center

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**Super Tech II**

**CLASS DESCRIPTION:**

**Automotive Electronics and HVAC**

**(Grades: 10-12 - Credits: 2)**

(Class may not be repeated)

This is an interactive electronics and air conditioning course for the automotive industry.  Interactive portions include:  safety, electrical circuits, meters sections, electronics, and HVAC.  Changes in technology and the increasing complexity of automotive systems can present quite a challenge to the automotive technician.  Students will be exposed to hands-on lab experiences.  This class also includes the opportunity to pursue embedded math credit.

With this class you are also to be a member of Skills USA.

**Learner Expectations:**

At the end of this class you should have knowledge of the following:

A basic understanding of electronics and electrical testing

A basic understanding of air conditioning, and air conditioning diagnosis

Job seeking and job retention skills

Industry related math

Industry related reading

**Course Rationale:**

The goal of this class is to give the students a solid basis in automotive electronics, thus giving them insight into the future education and career requirements to pursue this as a career opportunity. This class will also help guide the students toward a higher standard of excellence in the areas of job seeking skills along with building a strong work ethic, social skills and the importance of team work. Throughout the program we will focus on the basic academic skills needed to perform in any career, and will practice these skills in a class room setting and in a work related environment so as to promote better understanding of their importance.

Super Tech II Expectations

Each member of the class will follow the Lake Career & Technical Center Handbook rules. The handbook is the basis for all classes at the school. However, each program is different in the way that it operates; therefore, these are additional expectations.

1. Please respect all individuals in the classroom.
2. Please follow directions the first time they are given.
3. Students should take notes during lecture and actively participate in class discussions.
4. As a responsible student, you are expected to finish any project that you begin.
5. Please raise your hand to be recognized in class before speaking during instructional and test time.
6. Safety glasses must be worn in the lab area at all times.
7. Only soft soled tennis shoes or work shoes can be allowed in the lab area.
8. As you are now young adults please act that way accordingly.
9. If you are absent from school, please contact me before or after school upon your return for any missed assignments.
10. Please return all tools and equipment to proper storage area when not in use.
11. Ask permission before leaving the classroom or lab area. (Hall pass required)
12. Please be courteous when working around other student’s tools or projects.

***Super Tech***

***Power Standards***

***ST – Super Tech***

S Safety

STS1. Shop Safety

STS2. Tool Equipment Safety

TM Technical Math

TM1a Fractions

TM1b Measurements

TM1c Integers

TM1d Ratios

PE Business, Management and Technology- Demonstrate the ability to complete the employment process.

PE1. Demonstrate the ability to complete an application.

PE2. Demonstrate the ability to develop a resume.

WE Work Ethics and CTSO.

WE1a Scoring Guide

WE1b Student Organization Participation

E Electronics

STE1. Diagnose general electrical system.

STE2. Diagnose battery.

STE3. Diagnose starting system.

STE4. Diagnose charging system.

STE5. Diagnose lighting system.

AC Students should understand HVAC System Components, including Refrigerants.

STAC1. Students should understand System Operation and Principles of Refrigeration

STAC2. Students should understand System Diagnosis

STAC3. Students should understand System Service, including Refrigerant Recovery, Evacuation, and Recharge Procedures.