Program Planning Tool

Program Title: **CIP 15.0303 ELECTRONICS & COMMUNICATION TECHNOLOGY** Student Name: _____

This document has been designed as a tool to facilitate student placement decisions and provides important information about the program. The chart on the reverse side is designed to assist in the identification of necessary skills, present educational levels, and supports, if any, that are needed to foster program success.

Program Completion Requirements

A successful student will…

- Secondary Academic Course Requirements: The PA Dept. of Education's focus is to ensure every student is college and career ready, therefore all students are recommended to follow a college prep sequence of academic classes. Courses such as applied math or general science are not appropriate for this program. PDE's goal is to have all students perform at the competent or advanced level on the Keystone Exams and Program of Study end-of-program assessment (NOCTI).
- Complete an Occupational Competency Assessment (i.e. NOCTI end-of -program exam) and score at the "competent" or "advanced" level. This end-of -program exam will cover the full scope of the program of study curriculum and includes (1) a multiple choice test and (2) a performance test consisting of occupational related tasks scored and evaluated by industry judges.
- Earn a minimum of one industry recognized certification. Students will be encouraged and expected to earn all recognized industry certifications that make up the scope of the curriculum. Accommodations are not permitted for industry certifications. These include: IPC Thru-hole Soldering and Certified Electronics Technician Associate (CETa).
- Complete the approved program curriculum and earn a minimum of one RMCTC Job Title aligned with the student's career objective. Job titles are identified on the program task list, aligned with local workforce needs and high priority employment occupations, and annually reviewed and approved by the program's occupational advisory committee.
- Successful completion of Keystone Exams as determined by sending school district.
- Maintain a 95% attendance rate or better.
- Transition on to a post-secondary institution, military or related fulltime employment aligned to their CTC program of study.

Instructional Process/Specifications

A successful student will…

- Perform a wide variety of tasks in a laboratory environment with equipment consistent with industry standards. Up to 25 are assigned to work "independently" and in "small teams". Students progress by using learning guides in a self-directed manner. Students will be required to use tools such as AC / DC motors, electronic measuring probes, multimeters, soldering irons, stripping tools, voltage meters and wire cutters.
- Due to the risk of electrical shock and fire hazard, using this equipment requires self-discipline and strict adherence to rules to ensure safety of self and others. The laboratory simulates a real working environment therefore students will be exposed to the noise levels, dust, debris, and fumes associated with the electronic technology profession.
- Participate in classroom theory and laboratory applications for generally 2 ½ hours each day; students will spend 60% of their time in classroom theory and 40% of their time doing laboratory applications and live work.
- Participate in Career & Technical Student Organizations including SkillsUSA and/or National Technical Honor Society.
- Participate in a paid or unpaid work based learning related to the Program of Study (cooperative education, clinical internship, and/or job shadowing).
- Complete written and performance tests. Students will be evaluated weekly on occupational skill performance using rubrics. In addition, students will be evaluated daily on work ethics. Progress is measured by test performance, task completion and work ethic.
- Read and study textbooks and technical manuals. Most textbooks & Manuals are written at a 12-13th grade reading level.
- Complete homework on time. Homework typically involves chapter or workbook assignments, on line research assignments and writing assignments.
- Purchase appropriate work and safety attire, tools, and equipment.

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CTE Requirements	Present Educational Ability/Level	Support Needs
Program Completion – Strong self-determination skills and understanding of personal strengths and weaknesses. Ability to meet industry established standards of performance, complete the program of study without curriculum modifications, and earn industry certifications without testing accommodations.		
Reading & Language Arts Level- Text and manuals written on a 12th-13th grade reading level. Proficient on end-of-course exam (Keystone). Understanding written sentences and paragraphs in work related documents. Must have ability to read blueprints, wiring diagrams, schematic drawings, and engineering instructions for assembling electronic units and applying knowledge of electronic theory and components. NOCTI Assessment & Industry Certification Exams require a proficiency in English language skills.		
Math Level - At grade level and proficient on end-of-course exam (Keystone). Knowledge of arithmetic, algebra, geometry and their applications. Ability to learn and use the practical application of engineering science and technology. Ability to calculate and use electrical mathematical concepts and properties.		
Aptitude – Mechanical, inductive reasoning, deductive reasoning, analytical thinking, problem solving and troubleshooting, active listening, selective attention (ability to concentrate on a task over a period of time without being distracted).		
Safety & Physical – Visual color discrimination, finger dexterity, manual dexterity, arm-hand steadiness, multi-limb coordination. Hand-eye coordination. Due to the risk of electrical shock and fire hazard, using this equipment requires self-discipline and strict adherence to rules to ensure safety of self and others.		
Interpersonal/ Social – Dependability, attention to detail, integrity, cooperation, self-control, independence, stress tolerance, concern for others, adaptability/flexibility, persistence. Ability to work independently and in a team.		
Other Occupational/Program Requirements – Excellent self-discipline and stamina to focus for long periods of time at work station. Exposed to the noise levels, dust, debris, and fumes associated with the electronic technology profession.		