

Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics Career Cluster focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Robotics

Drone Regional Program of Study



The Robotics regional program of study introduces CTE learners to the occupations and education opportunities related to operating or designing an unmanned aircraft using a ground-based controller and the systems of communications between the controller and the aircraft.

Secondary Courses for High School Credit

Level 1

- Robotics I+ (1)

Level 2

- Robotics II* (1)

Level 3

- Scientific Research and Design* (1)

Level 4

- Practicum in Robotics* (2)

*Required Prerequisite +Recommended Prerequisite

Specific course offerings and availability are subject to change due to interest and enrollment.

Industry-Based Certifications

- FAA Part 107 Remote Drone Pilot



Robotics I+ (1)

In Robotics I, students will transfer academic skills to component designs in a project-based environment through implementation of the design process. Students will build prototypes or use simulation software to test their designs. Additionally, students will explore career opportunities, employer expectations, and educational needs in the robotic and automation industry.

Robotics II* (1)

In Robotics II, students will explore artificial intelligence and programming in the robotic and automation industry. Through implementation of the design process, students will transfer academic skills to component designs in a project-based environment. Students will build prototypes and use software to test their designs. Note: This course satisfies a math credit requirement for students on the Foundation High School Program.

Scientific Research and Design* (1)

Scientific Research and Design is a broad-based course designed to allow districts and schools considerable flexibility to develop local curriculum to supplement any program of study or coherent sequence. The course has the components of any rigorous scientific or engineering program of study from the problem identification, investigation design, data collection, data analysis, formulation, and presentation of the conclusions. These components are integrated with the career and technical education emphasis of helping students gain entry-level employment in high-skill, high-wage jobs and/or continue their education. Students must meet the 40% laboratory and fieldwork requirement. Students may take this course with different course content for a maximum of three credits.

Practicum in Robotics* (2)

The Practicum in Robotics course is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Students are encouraged to participate in extended learning experiences such as career and technical student organization and other leadership or extracurricular organizations.

Occupations	Median Wage	Annual Openings	% Growth
Aerospace Engineering and Operations Technicians	\$60,757	114	9%
Avionics Technicians	\$59,114	170	9%
Airline Pilots, Copilots, and Flight Engineers	\$165,130	1,150	9%
Commercial Pilots	\$86,310	548	9%

Successful completion of the Robotics (Drone) regional program of study will fulfill requirements of the Business and Industry or STEM endorsement if the math and science requirements are met. Revised – August 2022