

AVIATION OPERATIONS

Aviation Operations provides students with a broad-based introduction to the aviation industry. In addition, historic and current aviation topics will be addressed. Course activities include: familiarization with the Department of Aviation Technology and its curricula; historic overview of the field of aviation; overview of the current aviation environment; careers and employment opportunities in aviation, including discussions relative to aircraft manufacturing, airline operations, general aviation, air-freight, airport management, government service. In addition, this course will provide an introduction to areas of aviation safety, human factors, regulations, and certifications. This course is designed to enhance the students' knowledge of the pertinent areas of aircraft basic science that comprise the scientific fundamentals applied in all operational areas of the aviation industry. Although not scientific in nature, the fundamental areas of the federal aviation regulations, pertinent to most aviation operations, are also introduced in this course.

- DOE Code: 5528
- Recommended Grade Level: Grade 11-12
- Recommended Prerequisites: None
- Credits: 2-3 credits per semester, maximum of 6 credits
- Counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- This course is aligned with postsecondary courses for Dual Credit:
 - Vincennes University
 - AMNT 100- Primary Ground School
 - AMNT 103- Basic Aircraft Science
 - AFLT 258- Air Transportation
 - AFLT 285-ATC Procedures and Weather

Dual Credit

This course provides the opportunity for dual credit for students who meet postsecondary requirements for earning dual credit and successfully complete the dual credit requirements of this course.

Application of Content and Multiple Hour Offerings

Intensive laboratory applications are a component of this course and may be either school based or work based or a combination of the two. Work-based learning experiences should be in a closely related industry setting. Instructors shall have a standards-based training plan for students participating in work-based learning experiences. When a course is offered for multiple hours per semester, the amount of laboratory application or work-based learning needs to be increased proportionally.

Career and Technical Student Organizations (CTSOs)

Career and Technical Student Organizations are considered a powerful instructional tool when integrated into Career and Technical Education programs. They enhance the knowledge and skills students learn in a course by allowing a student to participate in a unique program of career and leadership development. Students should be encouraged to participate in SkillsUSA, the CTSO for this area.

Domain – Workplace Competency

Core Standard 1 Students apply and adapt aviation processes and procedures to perform effectively in the workplace.

Standards

- AO-1.1 Allocate the appropriate resources for task completion
- AO-1.2 Demonstrate effective interpersonal skills
- AO-1.3 Develop leadership skills
- AO-1.4 Establish positive relationships with people from diverse backgrounds
- AO-1.5 Research, analyze, and use data for work assignments
- AO-1.6 Apply effective critical thinking, decision making, and problem-solving techniques
- AO-1.7 Select and use appropriate tools and technology
- AO-1.8 Implement quality assurance measures and safeguards
- AO-1.9 Read and interpret written materials
- AO-1.10 Apply written communication skills
- AO-1.11 Demonstrate effective listening and speaking skills
- AO-1.12 Perform appropriate mathematical calculations correctly
- AO-1.13 Exhibit a responsible work ethic
- AO-1.14 Demonstrate accepted standards for ethical behavior

Domain – Career Development

Core Standard 2 Students examine career opportunities in the field of aviation to prepare for future employment or additional training.

Standards

- AO-2.1 Establish a personal career goal and develop objectives for achieving the goal
- AO-2.2 Evaluate employment and career pathway opportunities related to established career interest(s)
- AO-2.3 Create a continuing education plan that identifies further education and training options
- AO-2.4 Prepare for exams leading to certifications recognized by business and industry
- AO-2.5 Develop skills needed to enter the workforce
- AO-2.6 Evaluate resources that keep workers current in the career field
- AO-2.7 Demonstrate skills and attitudes needed for lifelong learning
- AO-2.8 Apply effective money management strategies

Domain 3 – Industry Rules and Procedures

Core Standard 3 Students analyze federal rules and regulations and modern trends in the field of aviation to predict future trends in the field.

Standards

- AO-3.1 Identify current events in the field of aviation, and discuss their relationship and potential affects on the aviation industry
- AO-3.2 Identify specific Federal Aviation Regulations (FARs), and discuss their importance
- AO-3.3 Identify aviation safety issues

AO-3.4 Identify aviation human factors issues