# AVIATION SCIENCE: GENERAL

**ASC 2560, Unmanned Vehicles and Systems Unmanned Vehicles and Systems**
**1 hr., 1 cr.,**
This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and application of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

**ASC 2560C, Unmanned Vehicle Systems Operations I Unmanned Vehicle Systems Operations I**
**5 hrs., 3 crs.,**
This course provides theoretical, simulator, and flight training to students that will enable them to operate Unmanned Aircraft Systems (UAS) safely in the United States National Airspace System (NAS) under 14 CFR Part 107 rules. Additionally, the course will provide students with historical insights on the development and application of Unmanned Vehicle System (UVS) technologies in civil and defense sectors.

**ASC 2560L, Unmanned Vehicles and Systems Lab Unmanned Vehicles and Systems Lab**
**4 hrs., 2 crs.,**
$165.00 lab fee. This lab course provides students with practical application of unmanned aerial vehicles (UAVs) and systems. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

**ASC 2561, Unmanned Vehicles and Systems Operations Unmanned Vehicles and Systems Operations**
**1 hr., 1 cr.,**
This course serves as follow-on to the introductory Unmanned Aerial Systems (UAS) course. It builds on the student's understanding of UAS history, technology, and regulations and builds on those to provide a basis for operating small UAS platforms (<55 pounds). Students will gain additional exposure to a variety of UAS operations, including aerial imaging, and search and rescue operations. Additional flight operations will be conducted in a controlled environment to provide exposure to real-world situations, with the intent of preparing the student for the FAA's (to be published) UAS Operator Certificate.

**ASC 2561C, Unmanned Vehicle Systems Operations II Unmanned Vehicle Systems Operations II**
**5 hrs., 3 crs.,**
Prerequisite: *ASC2560C. Building upon knowledge gained in ASC2560C, this course provides theoretical, simulator, and flight training to students that will enable them to operate Unmanned Aircraft Systems (UAS) safely in the United States National Airspace System (NAS) under conditions that typically would require a wavier or authorization beyond the limitations provided in 14 CFR Part 107 rules. Additionally, students will learn to operate maritime and terrestrial-based Unmanned Vehicle Systems (UVS).

**ASC 2561L, Umanned Vehicles and Systems Operations Lab Umanned Vehicles and Systems Operations Lab**
**4 hrs., 2 crs.,**
This lab course serves as a continuation to the introductory Unmanned Aerial Systems (UAS) course. It builds on the student's understanding of UAS technology, and regulations and builds on those to provide a basis for operating small UAS platforms (<55 pounds). Students will gain additional exposure to a variety of UAS operations, including aerial imaging, and search and rescue operations. Additional flight operations will be conducted in a controlled environment to provide exposure to real-world situations, with the intent of preparing the student for the FAA's UAS Operator Certificate (to be published).

**ASC 2564, Unmanned Vehicle Systems Security Unmanned Vehicle Systems Security**
**3 hrs., 3 crs.,**
(Offered spring). This course focuses on the concepts of UAS security and protection. Through a combination of instructor led discussion, assigned readings, and projects students will examine the concepts of security engineering, vulnerability, and malicious attack. Students will formulate opinions and strategies for protecting systems and assets from danger while understanding the implications of ignoring security concerns.

**ASC 2949, COOP Unmanned Systems Practicum COOP Unmanned Systems Practicum**
**1 hr., 1 cr.,**
1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student?s major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.