

**Course Description****ASC1010 | Aerospace History | 3.00 credits**

This course is designed to provide the student with an understanding of the significant events, people, places and technologies of aviation that have occurred as it progressed through history. The course begins centuries before man flew when concepts of flight were first being imagined to the first successful hot air balloons and the first heavier-than-air attempts at flight, and continues to the present day with supersonic aircraft and space vehicles from both a civilian and military perspective.

**Course Competencies:**

**Competency 1:** The student will demonstrate knowledge and understanding of aviation history by:

1. Discussing the motivations, perspectives, and technologies used by the earliest pioneers of flight, beginning with such figures as Leonardo da Vinci and the Montgolfier brothers
2. Explaining the development of early aviation, including hot air balloons, dirigibles, and early parachutes in their recreational, military, and explorational uses, examining and comparing the various attempts at heavier-than-air flight and discuss the contributions of pioneers such as George Cayley, Otto Lilienthal, and the Wright brothers
3. Analyzing the development of aviation in the period from the first controllable powered flight to the beginning of World War I, including improvements in controls, engines, and airframe design
4. Describing the revolutionary new applications of aviation that were developed and tested during World War I, such as aerial observation, air combat, ground attack, and strategic bombing
5. Understanding the development of aviation in the years of 1919-1939, between WWI and WWII, when aviation became a reliable form of transportation and matured as a war weapon
6. Describing the advances made in aviation during World War II in fields such as ground attack and strategic bombing, as well as new applications such as naval aviation and long-range air transport
7. Discussing the regulated post-war civil aviation industry, with the introduction of long-range jets, wide-body aircraft, and global aviation service
8. Discussing the developments of military aviation during the Cold War, including the introduction of jet power, swept wings, air-to-air
9. Refueling, flight and mission surveillance and guided missiles, and describing the new scenario introduced by the Civil Aviation Deregulation Act and the effects of the end of the Cold War on both civilian and military aviation

**Competency 2:** The student will analyze and discuss the impact and/or influence of aviation on a variety of subject matter, including historical, political, social, economic, scientific, and aesthetic

**Competency 3:** The student will produce reasoned, critical responses to common concerns with aviation history by:

1. Examining historical aviation milestones, aviation accidents and tragedies, federal aviation regulations, and aviation
2. Writings that illustrate the continuity and need for aviation in society, naming the various safety components/equipment of aircraft
3. Analyzing the way, they helped aviation become the safest mode of transportation

**Learning Outcomes:**

- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Use computer and emerging technologies effectively
- Demonstrate an appreciation for aesthetics and creative activities