

Aerospace System Engineering major's Curriculum

Major

1. Total Credits: 64
2. Required Courses for major: 38 credits
3. Elective Courses for Major: 26 credits or more

*Note: There is no availability for double major or minor for students from other departments.

*This curriculum is based on the semester of 2022 and can be changed.

1-1 Spring Semester

Required

- Writing and Presentation for Problem-solving
- Freshmen Seminar 1
- The Universe, Nature and Mankind
- Basics of Software and Coding
- General Physics 1
- Calculus 1
- Aerospace Weapon System

1-2 Fall Semester

Required

- Freshmen Seminar 2
- Western Philosophy: Issue and Discussion
- College English
- Calculus 2
- General Physics 2
- Introduction to Aerospace System Engineering
- History of Air Warfare

2-1 Spring Semester

Required

- Artificial Intelligence and Big Data
- Engineering Mathematics 1
- Thermodynamics
- Solid Mechanics
- Simulated Flight Theory and Training
- Military Science

Elective

- Flight Familiarization
- System Application Software

2-2 Fall Semester

Required

- Engineering Mathematics 2
- Fluid Mechanics
- System Dynamics

Elective

- Aviation Law
- Future Aerospace Industry
- Introduction to Electric & Electronic Engineering-Vessel Operations
- SW Application in Aerospace Engineering 1
- Flight Procedures

3-1 Spring Semester

Required

- Flight Mechanics
- Air Strategy
- Flight Safety Management

Elective

- Space Technology Management System
- Compressible Aerodynamics
- Heat Transfer
- Aircraft Structural Mechanics
- Aerospace Engineering Lab 1

3-2 Fall Semester

Required

- Leadership in Airforce

Elective

- Simulated Flight Training 1
- Cyber Warfare
- Numerical Analysis
- Aerospace Propulsion Engineering
- UAV Management System
- System Analysis and Design
- Control Engineering
- Aerospace Engineering Lab 2

4-1 Spring Semester

Elective

- Independent Study and Career Skills / Senior Project 1
- Simulated Flight Training 2
- System Reliability, Maintainability
- Robotics
- Engineering Optimization
- Design of UAV System 1
- Guidance and Control System Design

4-2 Fall Semester

Required

- Flight General & Training

Elective

- Independent Study and Career Skills / Senior Project 2
- Defense Acquisition System
- Simulated Flight Training 3
- Satellite Systems
- Rocket Propulsion
- Design of UAV System 2