

School of Business and Management Sciences / Aviation Management

2024 - 2025 Academic Year

CIVIL AVIATION ACCIDENTS

Syllabus

| Course Description | | | | | |
|---|--|--------------------------------|-------------------------|---------------------------|-------------|
| Name | Code | Semester | T+A Hour | Credit | ECTS |
| CIVIL AVIATION ACCIDENTS | HVY3114334 | Fall Semester | 3+0 | 3 | 5 |
| Prerequisites Courses | | | | | |
| Recommended Elective Courses | | | | | |
| Language of Instruction | Turkish | | | | |
| Course Level | First Cycle (Bachelor's Degree) | | | | |
| Course Type | Elective | | | | |
| Course Coordinator | Assist.Prof. Özlem İLDAY | | | | |
| Name of Lecturer(s) | Assist.Prof. Özlem İLDAY | | | | |
| Assistant(s) | | | | | |
| Aim | It is aimed that students recognize the factors that cause aircraft accidents, learn the requirements to prevent possible accidents, understand the behaviors in emergency and crisis situations, interpersonal communication skills, cockpit discipline, ability to handle and resolve problems. | | | | |
| Course Content | This course contains; Aircraft and Flight Safety,Human Factors - Judgement and Decision Making,Human Factors - Situation Assessment and Situation Awareness,Human Factors - Crew Resource Management (CRM), Interpersonal communication skills and technical proficiency,Human Factors - Spatial Disorientation,Accident case studies associated with human factors, review of reports, open discussion,Accident case studies associated with human factors, review of reports, open discussion (contin.),Summary,Runway Incursions, severity categories,Weather conditions, air masses and fronts, cloud formations,Weather conditions, unstable air, aircraft performance in heavy rain, icing,Turbulence, types of turbulence,Accident case studies, review of reports, open discussion,Mid-air collisions, the impact of mechanical problems and maintenance practices, accident examples. | | | | |
| Course Learning Outcomes | | | Teaching Methods | Assessment Methods | |
| 1 - Will be able to explain the factors that cause aircraft accidents. | | | 10, 13, 16, 37, 9 | A | |
| 1.1 - Explains the main cause and additional factors of aircraft accidents. | | | 10, 13, 16, 9 | A | |
| 1.2 - Understands the importance of flight safety. | | | 16, 9 | A | |
| 2 - Will be able to understand that the human factor is in the first place among the factors that cause accidents and will be able to analyze human errors. | | | 10, 13, 16, 9 | A | |
| 2.1 - Explains judgement and decision-making processes. | | | 16, 9 | A | |
| 2.2 - Describes situation awareness and situation assessment processes. | | | 16, 9 | A | |
| 2.3 - Explains the Crew Resource Management (CRM) discipline and expresses its importance. | | | 16, 9 | A | |
| 2.4 - Describes the causes of spatial disorientation and its effects on flight performance. | | | 16, 9 | A | |
| 3 - Will be able to examine and interpret accident cases and reports. | | | 10, 13, 16, 9 | A | |
| 3.1 - Analyzes accidents and explains the main cause. | | | 10, 13, 16, 9 | A | |
| 3.2 - Can list the factors contributing to the main cause of accidents. | | | 10, 13, 16, 9 | A | |
| 4 - Will be able to explain the effect of weather conditions on aircraft accidents. | | | 16, 9 | A | |
| 4.1 - Defines the damage that thunderstorms and accompanying bad weather conditions may cause to flight safety. | | | 16, 9 | A | |
| 4.2 - Explains the types, characteristics and effects of meteorological events such as precipitation, icing and turbulence. | | | 16, 9 | A | |
| 5 - Will be able to understand and explain the importance of situations encountered such as runway incursions, mid-air collisions, and mechanical problems. | | | 10, 13, 16, 37, 9 | A | |
| 5.1 Defines the runway incursions and classifies them according to the level of severity. | | | 16, 9 | A | |
| 5.2 - Defines the concept of see and avoid, and the search and detect technique. | | | 16, 9 | A | |
| 5.3 - Understands the impact of mechanical problems and maintenance practices. | | | 16, 9 | A | |
| Teaching Methods | 10: Discussion Method, 13: Case Study Method, 16: Question - Answer Technique, 37: Computer-Internet Supported Instruction, 9: Lecture Method | | | | |
| Assessment Methods | A: Traditional Written Exam | | | | |
| Lecture Schedule | | | | | |
| Sequence | Topics | Preliminary Preparation | | | |
| 1 | Aircraft and Flight Safety | | | | |
| 2 | Human Factors - Judgement and Decision Making | | | | |
| 3 | Human Factors - Situation Assessment and Situation Awareness | | | | |
| 4 | Human Factors - Crew Resource Management (CRM), Interpersonal communication skills and technical proficiency | | | | |
| 5 | Human Factors - Spatial Disorientation | | | | |
| 6 | Accident case studies associated with human factors, review of reports, open discussion | | | | |
| 7 | Accident case studies associated with human factors, review of reports, open discussion (contin.) | | | | |
| 8 | Summary | | | | |
| 9 | Runway Incursions, severity categories | | | | |
| 10 | Weather conditions, air masses and fronts, cloud formations | | | | |
| 11 | Weather conditions, unstable air, aircraft performance in heavy rain, icing | | | | |
| 12 | Turbulence, types of turbulence | | | | |
| 13 | Accident case studies, review of reports, open discussion | | | | |
| 14 | Mid-air collisions, the impact of mechanical problems and maintenance practices, accident examples | | | | |
| Evaluation Methods | | Weight(%) | | | |
| Midterm Exam | | 40 | | | |

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General Exam

|60

Resources

Aircraft Safety : Accident Investigations, Analyses, & Applications, 2nd edition - S.S. Krause, McGraw-Hill, 2003, ISBN: 978-0071409742
Accident reports

NTSB reports, www.nts.gov

flightsafety.org