Course Competency

ASC 1890 Intro to Aviation Accident Investigation

Course Description

In this course, students will acquire familiarization with current practices and principles of aircraft accident investigation, along with an examination of the roles and responsibilities of domestic and foreign government agencies, operators, and other parties. The student will ascertain the importance of an accident investigation and the contribution those accident causation have to the aviation industry. The course will provide empirical exercises in aircraft accident investigation including a review of the documentation and accident reporting process. (3 hr. Lecture)

Course Competency	Learning Outcomes
Competency 1: The student will demonstrate knowledge and understanding of aviation accident investigation history and present status by:	1. Communication 2. Numbers / Data 3. Information Literacy 4. Critical thinking 5. Social Responsibility 6. Ethical Issues 7. Computer / Technology Usage 8. Environmental Responsibility
1. Recognizing accident investigation definitions and terminology. 2. Identifying difficulties associated with an aircraft accident investigation. 3. Interpreting the origins and development of aircraft accident investigation. 4. Recognizing the establishment of the independent National Transportation Safety Board (NTSB). 5. Differentiating between NTSB and Federal Aviation Administration (FAA) roles and responsibilities. 6. Recognizing organizations (FAA, International Civil Aviation Organization (ICAO), etc…) associated with aircraft accident investigations. 7. Identifying with the party system, technical advisor, and others roles in	

domestic and foreign aviation accident investigation. 8. Evaluating the different “States” in the investigative process	
Competency 2: The student will demonstrate knowledge and understanding of the accident site protocols and data collection process by	1. Communication 2. Numbers / Data 3. Information Literacy 4. Critical thinking 5. Social Responsibility 6. Environmental Responsibility 7. Computer / Technology Usage 8. Ethical Issues
1. Identifying initial actions of an aircraft accident investigation. 2. Inferring accident site safety and priorities at scene. 3. Differentiating training programs required, policies and procedures, and types Personal Protective Equipment (PPE) for specific scene environment. 4. Recognizing the importance of types of on-scene documentation. 5. Inferring pre-accident or post-accident evidence. 6. Differentiating on-scene and post-recovery wreckage examination.	
Competency 3: The student will demonstrate knowledge and understanding additional elements to accident investigation by	1. Communication 2. Numbers / Data 3. Critical thinking 4. Information Literacy 5. Social Responsibility 6. Ethical Issues 7. Computer / Technology Usage 8. Environmental Responsibility
1. Differentiating witness information. 2. Recognizing types of information collection (e.g. maintenance, weather, training, autopsy, etc...)	

3. Identifying flight crew members' idiosyncrasy, medical, pilot's, and informational records. 4. Recognizing the various data recording equipment, on and off, the aircraft for critical information in the investigation along with the associated constraints and restraints. 5. Interpreting information from laboratory work analysis.	
Competency 4: The student will demonstrate knowledge and understanding from data collection analysis process by:	1. Communication 2. Numbers / Data 3. Critical thinking 4. Information Literacy 5. Social Responsibility 6. Ethical Issues 7. Computer / Technology Usage 8. Environmental Responsibility
1. Recognizing those human factors associated with accident probable causation from data collection. 2. Inferring sequence of events and contributing factors. 3. Differentiating critical information / data collected for probable causation. 4. Identifying the Software, Hardware, Environment, Liveware (SHEL) and Man, Machine, Medium, Mission and Management (5M) modeling in determine probable causation.	
Competency 5: The student will demonstrate knowledge and understanding of various factors in the investigation process by:	1. Communication 2. Numbers / Data 3. Critical thinking 4. Information Literacy 5. Social Responsibility 6. Ethical Issues 7. Computer / Technology Usage 8. Environmental Responsibility

1. Constructing a report of contributing factors and the accident probable causation. 2. Differentiating NTSB and ICAO aviation accident reports. 3. Recognizing elements of an NTSB narrative report. 4. Evaluating safety recommendation from probable accident causation and those contributing factors. 5. Recognizing investigative process application to determine probable causation for safety and efficiency improvements recommendations	

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