

## *Basic Aircraft Accident Investigation*

### ***Course Description***

This course is an introduction to aircraft accident investigation and designed for both students and current working professionals in the aviation industry. Teaching material is derived from a combination of personal experience, real-life accident investigation documentation, and other credible resources (e.g., Federal Aviation Administration and National Transportation Safety Board). The first phase of the course will begin with discussing the importance of a sound investigation philosophy and how he/she should prepare for the investigation. The second phase will deal with the "nuts and bolts" of the investigation process, which includes the person-machine-environment issues. The third phase will study actual accident investigations, where the student will apply what they learned in the first and second phases.

### ***Lecture Topics***

#### *FIRST PART*

- Foundations and psychology of accident investigations
- Person-machine-environment investigation matrix
- Government investigation agencies
- Preparation for the investigation
- Investigation gear
- Initial actions during the investigation
- Emotional stress on the investigator

#### *SECOND PART*

- Basic documentation techniques – photos and diagrams
- Airframe and powerplant investigation techniques
- Wreckage data and recovery
- Wreckage reconstruction
- Radar, ATC and weather analysis
- Interviewing witnesses
- Human factors
- Toxicology and Autopsy
- Crashworthiness analysis
- Fire investigations
- Analysis of mid-air collisions
- Analysis of in-flight breakups

#### *THIRD PART*

- Case studies of actual accidents (integrated with first and second parts)

### ***Schedule***

Five days - Monday through Friday, 7:30AM to 4:30PM, with one-hour lunch