

<b>Module Title:</b>	Human Factors in Aviation
<b>Language of Instruction:</b>	English
<b>Credits:</b>	5
<b>NFQ Level:</b>	6
<b>Module Delivered In</b>	<a href="#">2 programme(s)</a>
<b>Teaching &amp; Learning Strategies:</b>	This module will be taught by Lectures, Tutorials, and Class/Group Discussions analysing a range of published aircraft accident investigation reports.
<b>Module Aim:</b>	The student will understand that by recognising human factors issues in aircraft flight crew & maintenance engineering, it can help them to identify problems and prevent accidents. By analysing various case studies, the student will understand the 'human' side of aircraft accidents and incidents, specifically the social, physical, physiological and environmental aspects as they affect the flight crew, maintenance staff and management.
<b>Learning Outcomes</b>	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Recognise & describe how various Human Factors issues affect task performance
LO2	Analyse and effectively disseminate safety information with others using an appropriate range of communication skills/techniques (electronic, written, verbal and non-verbal)
LO3	Evaluate recurring human error patterns from their own technical, ethical and personal viewpoints
LO4	Analyse common/frequent aviation workplace hazards and develop/propose strategies to reduce/mitigate and/or eliminate them
LO5	Compare the differences between the 'Old' and 'New' views of Human Factors (Safety I v Safety II) and examine the impact on their own personal professional & ethical behaviours
<b>Pre-requisite learning</b>	
<b>Module Recommendations</b> <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
<b>Incompatible Modules</b> <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
<b>Co-requisite Modules</b>	
No Co-requisite modules listed	
<b>Requirements</b> <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

## Module Content & Assessment

### Indicative Content

#### Human Factors & Social Psychology

The Need To Take Human Factors Into Account; Incidents Attributable To Human Factors/Human Error; 'Murphy's' Law; Personal/Individual/Group Responsibilities; Professional Characteristics/Development/Behaviour; Motivation And De-Motivation; Peer Pressure; Safety 'Culture' - Ethical Standards/Responsibilities; Team Working; Management, Supervision And Leadership.

#### Human Performance & Limitations

Vision; Hearing; Information Processing; Attention And Perception; Memory; Claustrophobia And Physical Access.

#### Factors Affecting Performance/Communication

Fitness/Health; Stress: Domestic And Work Related; Time Pressure And Deadlines; Workload: Overload And Underload; Sleep And Fatigue, Shiftwork; Alcohol, Medication, Drug Abuse; Communication within/between Teams; Work Logging And Recording - Accuracy/Honesty/Integrity; Keeping Up To Date, Currency; Dissemination Of Information; Portfolios/Journals/Log Books

#### Tasks & Human Error

Physical Work; Repetitive Tasks; Visual Inspection; Complex Systems; Error Models And Theories; Types Of Error In Maintenance Tasks; Implications Of Errors (Accidents); Avoiding/Managing Error, Importance of Honesty/Truthfulness in Reporting Error; Safety I vs Safety II

#### Physical Environment & Hazards In The Workplace

Noise And Fumes; Illumination; Climate And Temperature; Motion And Vibration; Working Environment; Recognising And Avoiding Hazards; Dealing With Emergencies

Assessment Breakdown	%
Continuous Assessment	50.00%
Project	50.00%

### Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Written Report	Each student will complete a range of tutorials during term time for which a maximum of 50% will be awarded	1,2,3,4,5	50.00	n/a

### Project

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	Each student will complete a range of Research Activities culminating in a Written Portfolio, during term time, for which a maximum of 50% will be awarded	1,2,3,4,5	50.00	n/a

No Practical

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

**Module Workload**

<b>Workload: Full Time</b>		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	12 Weeks per Stage	4.00
Independent Learning	15 Weeks per Stage	5.13
Total Hours		125.00

**Module Delivered In**

Programme Code	Programme	Semester	Delivery
CW_EEAER_B	<a href="#">Bachelor of Engineering (Honours) in Aerospace Engineering</a>	3	Mandatory
CW_EEACS_D	<a href="#">Bachelor of Engineering in Aircraft Systems</a>	3	Mandatory