

Module Title:	Human Factors in Aviation
Language of Instruction:	English
Credits:	10
NFQ Level:	6
Module Delivered In	1 programme(s)
Teaching & Learning Strategies:	Lectures and class-room discussion, group work activities, and role play. Practical aspects of learning are underpinned by mentored application of techniques and methodologies through case studies. Lectures may be delivered online using Blackboard Collaborate. Students are provided with opportunities to test theoretical perspectives through the use of break-out groups on Collaborate. Blackboard is the college platform for all resources for the course module
Module Aim:	Human Factors is a subject which is studied by those working in the aviation industry to provide a framework and understanding of how accidents and incidents occur. The module includes understanding from a technical, psychological and operational and ergonomic perspective. It provides students with a general overview of how the practice contributes to the development of regulatory safety management systems and practices.
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Will be able to apply concepts and skills appropriate to the area of human factors,
LO2	Will have the capacity to understand Human Factors measures and design requirements to achieve safety assurance and regulatory acceptance of changes
LO3	Will be able to confidently identify and understand the impact of technological change on the Human in the system
LO4	Will be able to confidently engage, converse and understand Human Factors experts from a project management perspective
LO5	Will have the capacity to identify, assess and mitigate the generators of Fatigue & Stress and develop and appreciate the steps of the risk management strategy framework
Pre-requisite learning	
Module Recommendations <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements <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
General The requirement to consider Human performance and capabilities as a manager in the air transport industry. To take Human Factors under consideration; Understanding socio-technical systems and their interaction resulting in incidents or accidents and appropriate HF investigation techniques. Managerial oversight of changes in human factors context. Understanding human safety assurance principles and processes in the design, implementation, operation and decommissioning/removal of systems
Human Performance And Limitations The Human Body, Human Information Processing (HIP); Attention and Perception; Memory; Physical Access
Social Psychology Responsibility: Individual and Group Behaviour; Motivation and De-Motivation; Group think and risky shift (Challenger Syndrome) 'Culture' Issues; Team Working; Management, Supervision and Leadership
Factors Affecting Performance Fitness/Health; Stress: Domestic and Work Related; Time Pressure and Deadlines; Workload: Overload and Underload; Sleep and Fatigue, Shiftwork; Alcohol, Medication, Drug Abuse
Human Performance Assurance Measures Measuring Workload, Taskload and Situational Awareness. Developing the Human Factors argument for changes. Human Factors integration in organisations. The Human Factor Toolbox.
Resilience Engineering Performance variability and resonance. Competing demands and constraints. Ability for a system to absorb a deviation and return to equilibrium, including the human. Close coupling and cascade effect.
Behind Human Error New view of Error Models, Theories and their application; Error Types Errors and Violations outcomes (I.E. Accidents) Avoiding and Managing Errors.
Hazards and Risks Awareness Managerial understanding of the requirement to apply an appropriate risk management system. Managing Human Factor risks.

Assessment Breakdown	%
Continuous Assessment	100.00%

Continuous Assessment				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Case Studies	Learners will be required to demonstrate the achievement of the learning outcomes through continuous assessment work. There will be one continuous assessment self directed research project (3000 to 3500 words). This individual assignment will test the students knowledge of Human Factors	1,2,3,4,5	100.00	Sem 1 End

No Project

No Practical

No End of Module Formal Examination

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

Module Workload

Workload: Part Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	Per Semester	1.28
Independent Learning Time	Per Semester	7.20
Work - based Learning	Per Semester	1.52
Total Hours		250.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_BSFOP_D	Bachelor of Science in Flight Operations	2	Mandatory