

Module Title:	Advanced Aviation Navigation	
Language of Instruction:	English	
Credits:	5	
NFQ Level:	7	
Module Delivered In	1 programme(s)	
Teaching & Learning Strategies:	This module will be taught over two semesters - by class lectures, class discussions and participation and self-directed learning	
Module Aim:	The aim of this module is to provide the students with a detailed knowledge of aircraft navigation, aircraft navigation systems and aerodrome aids	
Learning Outcomes		
On successful completion of this module the learner should be able to:		
LO1	Interpret the Lambert Conformal, Conic and Polar Stereographical projections	
LO2	Demonstrate an understanding of the functions of Radio Navigation Aids	
LO3	Demonstrate an understanding of the functions of Ground Navigation Aids	
LO4	Demonstrate an understanding of the use Standard Instrument Departure (SIDs) and Standard Terminal Arrival Route(STARs)	
LO5	Demonstrate an understanding of the Aircraft Communication and Alerting System (ACARS)	
Pre-requisite learning		
Module Recommendations		
This is prior learning (or a practical skill) that is recommended before enrolment in this module.		
7585	AVIA H2S22	Introduction to Aviation Navigation
Incompatible Modules		
These are modules which have learning outcomes that are too similar to the learning outcomes of this module.		
No incompatible modules listed		
Co-requisite Modules		
No Co-requisite modules listed		
Requirements		
This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.		
No requirements listed		

Module Content & Assessment
Indicative Content
Stereographical projections

Theory and practice of the Lambert Conformal, Conic, Polar, Mercator and the Great circle on the Mercator

Radio and Ground Navigation Equipment

Principles of radio transmission, wave length, amplitude, frequency; Altimetry - QNH and QFE; VHF omnidirectional Radio Range(VOR); Instrument Landing System (ILS) and its categories; Distance Measuring Equipment(DME); Runway Visual Range (RVR); Radio direction finding (RDF); Ground radar – primary and secondary; GPS

Arrival and Departure charts for Aerodromes

Standard Terminal Arrival Route (STAR); Standard Instrument Departure (SID); Decoding the Standard Instrument Arrivals (STARs); Decoding the Standard Instrument Departure (SIDs); Using the SIDs and STARs for navigation

Aircraft Communications Addressing and Reporting System (ACARS)

ACARS System description; Role of ACARS; Message types

Assessment Breakdown	%
Continuous Assessment	40.00%
End of Module Formal Examination	60.00%

Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Essay	Assignment will address learning outcomes 1, 2 & 3	1,2,3	40.00	Ongoing

No Project

No Practical

End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	Final examination will address all learning outcomes	1,2,3,4,5	60.00	End-of-Semester

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	0.96
Independent Learning Time	Per Semester	4.04
Total Hours		125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_BSFOP_D	Bachelor of Science in Flight Operations	3	Mandatory