TECH C1606: Technical Aircraft Leasing and Management

Module Title:	Technical Aircraft Leasing and Management
Language of Instruction:	English

Credits:	5

NFQ Level:	8

Module Delivered In	2 programme(s)

Teaching & Learning Strategies:	• Teaching will be a blend of lectures and case studies • There will be at least one guest lecturer from a leading leasing company executive to cover the financial and legislative aspects of the industry.

Module Aim:	To provide students with the knowledge and skills required to operate within the technical area of the aircraft leasing industry, manage engineering projects and to deal with ethical constraints in professional environments.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Appraise each of the major aircraft maintenance events and determine the equations used to compute the respective maintenance reserve rates.
LO2	Interrogate aircraft technical records to ensure compliance with the continuing airworthiness regulations.
LO3	Conduct a technical audit of a commercial aircraft and interpret the guidelines and best practices that ease the transferability of aircraft.
LO4	Apply project management skills to engineering projects.
LO5	Assess ethical constraints in professional environments and the ethical implications of decisions made by engineers

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
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

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Module Content & Assessment

Indicative Content
Maintenance Reserves - Maintenance Utility consumed - Maintenance reserves economics - Reserves for Airframe Inspections, major component restorations and LLPs - Effect of ageing aircraft - Sample lease contract/s - Managing the Contract - Maintenance reserves coverage and exposure
Airworthiness Directives - Publication of AD's - AD status listing, applicability, method of compliance. - AD Dirty Fingerprints
Part M - ICAO-Chicago Convention - Part M-continuing airworthiness and where it fits in to Regulations - Part M-Subparts explained - CAMO's
Aircraft Audits / Redeliveries - Aircraft Audit -what's expected. - Technical records administration - Component lists - Mods, SBs, STCs - Component Certificates - Aircraft Redelivery considerations - Closing gaps and understanding of what is vital and what "nice to have" - Traceability - Back to birth records – "dirty fingerprints" - Tech Log - Acceptable Deferred Defects Record - Maintenance programmes - Status of aircraft in relation to MPD - Company Maintenance programmes - Structural sampling – fleet programs, sampling, standalone aircraft
Project Management Project management skills. Financial & scheduling tools. Organisational planning tools. Risk management: evaluating risks and control measures.
Entrepreneurship Company & contract law. Business funding & finance. Start-up companies. Business plans.
Ethics Safety, health and welfare of co-workers, clients, the public. Sustainable development & awareness of environmental issues. Intellectual property rights. Ethical constraints, ethical decision-making, ethical implications of engineering decisions.
Enterprise Information Systems Management functions & organisational structure. Enterprise Resource Planning. Engineering Change Order.
Guest Lectures There will be at least one guest lecture from a leading leasing company executive to cover the financial and legislative aspects of the industry
Safety Management Systems ICAO Annex 19 Overview, Risk Assessments
Incident Response Planning Overview of Critical Incident Stress Management system, Public relations and press releases, Media and communications, Roles & Responsibilities communicating through Social media

Assessment Breakdown	%
Continuous Assessment	100.00%

Continuous Assessment

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Examination	Mid term class test	1,2,4	20.00	Week 6
Examination	End of term class test	1,2,3,4,5	20.00	Week 12
Project	Students will complete projects / assignments, for example, a business plan for a start up company, an aircraft audit report, an Airworthiness Directive assessment report, a maintenance reserves report.	1,2,3,4,5	60.00	n/a

No Project

No Practical

No End of Module Formal Examination

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

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Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Lecture	12 Weeks per Stage	4.00
Independent Learning Time	15 Weeks per Stage	5.13
	Total Hours	125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_EEAER_B	Bachelor of Engineering (Honours) in Aerospace Engineering	8	Mandatory
CW_EEPLT_D	Bachelor of Science in Pilot Studies	2	Mandatory