

**JAA Administrative & Guidance Material
Section Five: Licensing, Part Two: Procedures**

CHAPTER 17: DETAILED THEORETICAL KNOWLEDGE SYLLABUS AND LEARNING OBJECTIVES

Subject – 071 – Operational Procedures

See Appendix 1 to JAR-FCL 1.470 and JAR-FCL 2.470

INTRODUCTION

Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
070 00 00 00	OPERATIONAL PROCEDURES						
071 01 00 00	GENERAL REQUIREMENTS						
071 01 01 00	ICAO Annex 6						
071 01 01 01	Definitions						
LO	Alternate aerodrome : take-off alternate, en-route alternate, ETOPS en-route alternate, destination alternate (ICAO Annex 6 Part I Chapter 1)	x	x				
LO	Alternate heliport (ICAO Annex 6 Part III Section 1 Chapter 1)			x	x	x	
LO	Flight time - aeroplanes (ICAO Annex 6 Part I Chapter 1)	x	x				
LO	Flight time - helicopters (ICAO Annex 6 Part III Section 1 Chapter 1)			x	x	x	
071 01 01 02	Applicability						
LO	State that Part 1 shall be applicable to the operation of aeroplanes by operators authorized to conduct international commercial air transport operations (ICAO Annex 6 Part I Chapter 2)	x	x				
LO	State that Part 3 shall be applicable to all helicopters engaged in international commercial air transport operations or in international general aviation operations, except it is not applicable to helicopters engaged in aerial work. (ICAO Annex 6 Part III Section 1 Chapter 2)			x	x	x	
071 01 01 03	General						
LO	State compliance with laws, regulations and procedures (ICAO Annex 6 Part I Chapter 3.1 / Part III Section 2 Chapter 1.1)	x	x	x	x	x	
LO	State accident prevention and flight safety programme (ICAO Annex 6 Part I Chapter 3.2)	x	x				

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State flight safety documents system (ICAO Annex 6 Part I Chapter 3.3)	x	x				
LO	State maintenance release (ICAO Annex 6 Part I Chapter 8.8 / Part III Section 2 Chapter 6.7)	x	x	x	x	x	
LO	Lights to be displayed by aircraft (ICAO Annex 6 Part I Appendix 1)	x	x				
071 01 02 00	JAR-OPS						
071 01 02 01	JAR-OPS Subpart A - Applicability	x	x	x	x	x	
LO	State JAR-OPS applicability (JAR-OPS 1.001 / 3.001)	x	x	x	x	x	
071 01 02 02	JAR-OPS Subpart B - General	x	x	x	x	x	
LO	State that a commercial air transportation flight must be in accordance with JAR OPS (JAR-OPS 1.005 / 3.005)	x	x	x	x	x	
LO	Flight manual limitations – Flight through the height velocity (HV) envelope (JAR-OPS 3.005 (c) Appendix 1)			x	x	x	
LO	Helicopter Emergency Medical Service – Terminology (JAR-OPS 3.005 (d) Appendix 1)			x	x	x	
LO	Operations over a hostile environment – Applicability (JAR-OPS 3.005 (e) Appendix 1)			x	x	x	
LO	Small helicopters operations – Terminology and Approval (JAR-OPS 3.005 (f) Appendix 1)			x	x	x	
LO	Local area operations – Approval (JAR-OPS 3.005 (g) Appendix 1)			x	x	x	
LO	State the requirements about language for crew communication and operations manual (JAR-OPS 1.025 / 3.025)	x	x	x	x	x	
LO	State the operator's requirements regarding a quality system (JAR-OPS 1.035 / 3.035)	x	x	x	x	x	
LO	State the operator's requirements regarding accident prevention and flight safety program (JAR-OPS 1.037 / 3.037)	x	x	x	x	x	
LO	State the operator's responsibility regarding the training requirements of crew members who are neither flight crew nor cabin crew (JAR-OPS 1.040 / 3.040)	x	x	x	x	x	
LO	State the operations limitations regarding ditching requirements (JAR-OPS 1.060)	x	x				

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	State the regulations concerning the carriage of persons on an aircraft (JAR-OPS 1.075 / 3.075)	X	X	X	X	X
LO	State the crew members responsibilities in the execution of their duties, and define the commander authority (JAR-OPS 1.085-090 / 3.085-090)	X	X	X	X	X
LO	State the operator's and commander's responsibilities regarding admission to the flight deck and the carriage of unauthorized persons or cargo (JAR-OPS 1.100-105 / 3.100-105)	X	X	X	X	X
LO	State the operator's responsibility concerning portable electronic devices (JAR-OPS 1.110 / 3.110)	X	X	X	X	X
LO	State the operator's responsibilities regarding admission in an aircraft of a person under the influence of drug or alcohol (JAR-OPS 1.115 / 3.115)	X	X	X	X	X
LO	State the regulations concerning endangering safety (JAR-OPS 1.120 / 3.120)	X	X	X	X	X
LO	List the documents to be carried on each flight (JAR-OPS 1.125 / 3.125)	X	X	X	X	X
LO	State the operator's responsibility regarding manuals to be carried (JAR-OPS 1.130 / 3.130)	X	X	X	X	X
LO	List the additional information and forms to be carried on board (JAR-OPS 1.135 / 3.135)	X	X	X	X	X
LO	List the items of information to be retained on the ground by the operator (JAR-OPS 1.140 / 3.140)	X	X	X	X	X
LO	State the operator's responsibility regarding inspections (JAR-OPS 1.145 / 3.145)	X	X	X	X	X
LO	State the responsibility of the operator and the commander regarding the production of and access to records and documents (JAR-OPS 1.150 / 3.150)	X	X	X	X	X
LO	State the operator's responsibility regarding the preservation of documentation and recordings ; including recorders recordings (JAR-OPS 1.155-160 / 3.155-160)	X	X	X	X	X
LO	Define the terms used in leasing and state the responsibility and requirements of each party in various cases (JAR-OPS 1.165 / 3.165)	X	X	X	X	X
071 01 02 03	JAR-OPS Subpart C - Operator certification and supervision	X	X	X	X	X

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	State the requirement to be satisfied for the issue of an Air Operator's Certificate (JAR-OPS 1.175 / 3.175)	x	x	x	x	x
LO	State the rules applicable to Air Operator Certification (JAR-OPS 1.180 / 3.180)	x	x	x	x	x
LO	State the conditions to be met for the issue or revalidation of an AOC (JAR-OPS 1.180 / 3.180)	x	x	x	x	x
LO	Explain the contents and conditions of the AOC (JAR-OPS 1.175 Appendix 1 / 3.175 Appendix 1)	x	x	x	x	x
071 01 02 04	JAR-OPS Subpart D - Operational procedures (except long range flights preparation)	x	x	x	x	x
LO	State the operator's responsibilities regarding Operational control (JAR-OPS 1.195 / 3.195)	x	x	x	x	x
LO	State the operator's responsibilities regarding Operations Manual (JAR-OPS 1.200 / 3.200)	x	x	x	x	x
LO	State the operator's responsibilities regarding Competence of operations personnel (JAR-OPS 1.205 / 3.205)	x	x	x	x	x
LO	State the operator's responsibilities regarding Establishment of procedures (JAR-OPS 1.210 / 3.210)	x	x	x	x	x
LO	State the operator's responsibilities regarding Use of air traffic services (JAR-OPS 1.215 / 3.215)	x	x	x	x	x
LO	State the operator's responsibilities regarding Authorisation of Aerodromes/Heliports by the Operator (JAR-OPS 1.220 / 3.220)	x	x	x	x	x
LO	State the operator's responsibilities regarding Aerodrome/Heliport operating minima (JAR-OPS 1.225 / 3.225)	x	x	x	x	x
LO	State the operator's responsibilities regarding departure and approach procedures (JAR-OPS 1.230 / 3.230)	x	x	x	x	x
LO	State the operator's responsibilities regarding Routes and areas of operation (JAR-OPS 1.240 / 3.240)	x	x	x	x	x

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State the additional requirements for RVSM , RNAV and MNPS operations (JAR-OPS 1.241-243)	x	x				
LO	Maximum distance from an adequate aerodrome for two-engined aeroplanes without an ETOPS Approval (JAR-OPS 1.245)	x	x				
LO	List the factors to consider when establishing minimum flight altitude (JAR-OPS 1.250-365 / 3.250-365)	x	x	x	x	x	
LO	Fuel policy (JAR-OPS 1.255 + AMC / 3.255 + AMC)	x	x	x	x	x	
LO	State the requirements for carrying Persons with Reduced Mobility (JAR-OPS 1.260 / 3.260)	x	x	x	x	x	
LO	State the operator's responsibilities for the carriage of inadmissible passengers, deportees or persons in custody (JAR-OPS 1.265 / 3.265)	x	x	x	x	x	
LO	State the requirements for the stowage of baggage and cargo in the passenger cabin (JAR-OPS 1.270 + Appendix 1 / 3.270 + Appendix 1)	x	x	x	x	x	
LO	State the requirements regarding passenger seating and emergency evacuation (JAR-OPS 1.280 / 3.280)	x	x	x	x	x	
LO	Detail the content of a passenger briefing in respect of emergency equipment and exits (JAR-OPS 1.285 / 3.285)	x	x	x	x	x	
LO	State the flight preparation forms to be completed before flight (JAR-OPS 1.290 / 3.290)	x	x	x	x	x	
LO	State the commander responsibilities during flight preparation (JAR-OPS 1.290 / 3.290)	x	x	x	x	x	
LO	State the rules for aerodromes/heliports selection (including ETOPS configuration) (JAR-OPS 1.295 / 3.295)	x	x	x	x	x	
LO	State the rules for refuelling/defuelling (JAR-OPS 1.305-307 / 3.305-307)	x	x	x	x	x	
LO	Crew members at station (JAR-OPS 1.310 / 3.310)	x	x	x	x	x	
LO	Seats, safety belts and harnesses (JAR-OPS 1.320 / 3.320)	x	x	x	x	x	
LO	Securing of passenger cabin and galley(s) (JAR-OPS 1.325 / 3.325)	x	x	x	x	x	

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	State the commander responsibility regarding smoking on board (JAR-OPS 1.335 / 3.335)	x	x	x	x	x
LO	State under which conditions a commander can commence or continue a flight regarding meteorological conditions (JAR-OPS 1.340-355 / 3.340-355)	x	x	x	x	x
LO	State the commander responsibility regarding ice and other contaminants (JAR-OPS 1.345 / 3.345)	x	x	x	x	x
LO	State the commander responsibility regarding fuel to be carried and in flight fuel management (JAR-OPS 1.350-375 + Appendix 1 / 3.310-375 + Appendix 1)	x	x	x	x	x
LO	State the requirements regarding the use of supplemental oxygen (JAR-OPS 1.385 / 3.385)	x	x	x	x	x
LO	Ground proximity detection (JAR-OPS 1.395 / 3.395)	x	x	x	x	x
LO	State the commander responsibility regarding approach and landing (JAR-OPS 1.400-405 / 3.400-405)	x	x	x	x	x
LO	State the circumstances under which a report shall be submitted (JAR-OPS 1.420 / 3.420)	x	x	x	x	x
071 01 02 05	JAR-OPS Subpart E - All weather operations	x		x		
LO	State the operator's responsibility regarding aerodrome/heliport operating minima (JAR-OPS 1.430 + Appendix 1 + Appendix 2/ 3.430 + Appendix 1)	x		x		
LO	List the parameters to be considered in establishing the aerodrome operating minima (JAR-OPS 1.430 + Appendix 1 + Appendix 2/ 3.430 + Appendix 1)	x		x		
LO	Define the criteria to be taken into consideration for the classification of aeroplane (JAR-OPS 1.430 + Appendix 1 + Appendix 2)	x				
LO	Define the following terms : Circling, Low Visibility Procedures, Low Visibility Take-Off, Visual approach (JAR-OPS 1.435 / 3.435)	x		x		
LO	Define the following terms : Flight control system, Fail-passive flight control system, Fail-operational flight control system, Fail-operational hybrid landing system (JAR-OPS 1.435)	x				
LO	Define the following terms : Final Approach and Take-off Area (JAR-OPS 3.435)			x		

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	State the general operating rules for low visibility operations (JAR-OPS 1.440 + Appendix 1 / 3.440 + Appendix 1)	x		x		
LO	Low visibility operations – Aerodrome/Heliport considerations (JAR-OPS 1.445 / 3.445)	x		x		
LO	State the training and qualification requirements for flight crew to conduct low visibility operations (JAR-OPS 1.450 + Appendix 1 / 3.450 + Appendix 1)	x		x		
LO	State the operating procedures for low visibility operations (JAR-OPS 1.455 + Appendix 1 / 3.455 + Appendix 1)	x		x		
LO	State the operator and commander’s responsibilities regarding minimum equipment for low visibility operations (JAR-OPS 1.460 / 3.460)	x		x		
LO	VFR Operating Minima (JAR-OPS 1.465 + Appendix 1 / 3.465 + Appendix 1 + Appendix 2)	x		x		
LO	Aerodrome Operating Minima : State under which conditions the commander can commence take-off (JAR-OPS Appendix 1 to 1.430 / Appendix 1 to 3.430)	x		x		
LO	Aerodrome Operating Minima : State that take-off minima is expressed as visibility or RVR (JAR-OPS Appendix 1 to 1.430 / Appendix 1 to 3.430)	x		x		
LO	Aerodrome Operating Minima : State the take-off RVR value depending on the facilities (JAR-OPS Appendix 1 to 1.430 / Appendix 1 to 3.430)	x		x		
LO	Aerodrome Operating Minima : State the system minima for non precision approach (JAR-OPS Appendix 1 to 1.430 / Appendix 1 to 3.430)	x		x		
LO	Aerodrome Operating Minima : State under which conditions a pilot can continue the approach below MDA/H or DA/H (JAR-OPS Appendix 1 to 1.430 / Appendix 1 to 3.430)	x		x		
LO	Aerodrome Operating Minima : State the lowest minima for precision approach category 1 (including single pilot operations) (JAR-OPS Appendix 1 to 1.430 / Appendix 1 to 3.430)	x		x		
LO	Aerodrome Operating Minima : State the lowest minima for precision approach category 2 operations (JAR-OPS Appendix 1 to 1.430 / Appendix 1 to 3.430)	x		x		

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		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Aerodrome Operating Minima : State the lowest minima for precision approach category 3 operations (JAR-OPS Appendix 1 to 1.430)	x					
LO	Aerodrome Operating Minima : State the lowest minima for circling and visual approach (JAR-OPS Appendix 1 to 1.430 / Appendix 1 to 3.430)	x		x			
LO	Aerodrome Operating Minima : State the RVR value and cloud ceiling depending on the facilities (class 1, 2 and 3) (JAR-OPS Appendix 1 to 3.430)			x			
LO	Aerodrome Operating Minima : State under which conditions an Airborne Radar Approach can be performed and state the relevant minima (JAR-OPS Appendix 1 to 3.430)			x			
071 01 02 06	JAR-OPS Subpart K - Instruments and equipment	x	x	x	x	x	
LO	State which items do not require an equipment approval (JAR-OPS 1.630 / 3.630)	x	x	x	x	x	
LO	State the requirements regarding spare fuses availability (JAR-OPS 1.635)	x	x				
LO	State the requirements regarding operating lights (JAR-OPS 1.640 / 3.640)	x	x	x	x	x	
LO	State the requirements regarding windshield wipers (JAR-OPS 1.645)	x	x				
LO	Equipment for operations requiring a radio communication and/or radio navigation system (JAR-OPS 3.647)			x	x	x	
LO	List the minimum equipment required for day and night VFR flight (JAR-OPS 1.650-652 / 3.650-652)	x	x	x	x	x	
LO	List the minimum equipment required for IFR flight (JAR-OPS 1.652 / 3.652)	x		x			
LO	State the required equipment for single pilot operation under IFR (JAR-OPS 1.655 / 3.655)	x		x			
LO	State the requirements for an altitude alert system (JAR-OPS 1.660)	x	x				
LO	State the requirements for radio altimeters (JAR-OPS 3.660)			x	x	x	
LO	State the requirements for GPWS (JAR-OPS 1.665)	x	x				
LO	State the requirements for ACAS (JAR-OPS 1.668)	x	x				

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		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State the conditions under which an aircraft must be fitted with a weather radar (JAR-OPS 1.670 / 3.670)	x	x	x	x	x	
LO	State the requirement for operations in icing conditions (JAR-OPS 1.675 / 3.675)	x	x	x	x	x	
LO	State the conditions under which a crew member interphone system and public address system are mandatory (JAR-OPS 1.685-690-695 / 3.685-690-695)	x	x	x	x	x	
LO	State the circumstances under which a cockpit voice recorder is compulsory (JAR-OPS 1.700-705-710 / 3.700-705)	x	x	x	x	x	
LO	State the rules regarding the location, construction, installation and operation of cockpit voice recorders (JAR-OPS 1.700-705-710 / 3.700-705)	x	x	x	x	x	
LO	State the circumstances under which a flight data recorder is compulsory (JAR-OPS 1.715-720-725 / 3.715-720)	x	x	x	x	x	
LO	State the rules regarding the location, construction, installation and operation of flight data recorders (JAR-OPS 1.715-720-725 / 3.715-720)	x	x	x	x	x	
LO	State the requirements about seats, seat safety belts, harnesses and child restraint devices (JAR-OPS 1.730 / 3.730)	x	x	x	x	x	
LO	State the requirements about Fasten Seat belt and No Smoking signs (JAR-OPS 1.731 / 3.731)	x	x	x	x	x	
LO	State the requirements regarding internal doors and curtains (JAR-OPS 1.735)	x	x				
LO	State the requirements regarding First-Aid kits (JAR-OPS 1.745 / 3.745)	x	x	x	x	x	
LO	State the requirements regarding Emergency medical kits and First-aid oxygen (JAR-OPS 1.755-760)	x	x				
LO	Detail the rules regarding the carriage and use of supplemental oxygen for passengers and crew (JAR-OPS 1.770 + Appendix 1 / 1.775 + Appendix 1 / 3.775 + Appendix 1)	x	x	x	x	x	
LO	Detail the rules regarding crew protective breathing equipment (JAR-OPS 1.780)	x	x				

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		ATPL	CPL	ATPL/IR	ATPL	
LO	Describe the minimum number, type, and location of hand fire extinguishers (JAR-OPS 1.790 / 3.790)	x	x	x	x	x
LO	Describe the minimum number and location of crash axes and crowbars (JAR-OPS 1.795)	x	x			
LO	Specify the colors and markings used to indicate break-in points (JAR-OPS 1.800 / 3.800)	x	x	x	x	x
LO	State the requirements for means of emergency evacuation (JAR-OPS 1.805)	x	x			
LO	State the requirements for megaphones (JAR-OPS 1.810 / 3.810)	x	x	x	x	x
LO	State the requirements for emergency lighting (JAR-OPS 1.815 / 3.815)	x	x	x	x	x
LO	State the requirements for an emergency locator transmitter (JAR-OPS 1.820 / 3.820)	x	x	x	x	x
LO	State the requirements for life jackets, life-rafts and survival ELTs (JAR-OPS 1.825-830 / 3.825-830)	x	x	x	x	x
LO	State the requirements for crew survival suit (JAR-OPS 3.827)			x	x	x
LO	State the requirements for survival equipment (JAR-OPS 1.835 / 3.835)	x	x	x	x	x
LO	State additional requirements for helicopters operating to or from helidecks located in a hostile sea area (JAR-OPS 3.837)			x	x	x
LO	State the requirements for an emergency flotation equipment (JAR-OPS 3.843)			x	x	x
071 01 02 07	JAR-OPS Subpart L - Communication and navigation equipment	x	x	x	x	x
LO	Explain the general requirements for communication and navigation equipment (JAR-OPS 1.845 / 3.845)	x	x	x	x	x
LO	State that the radio communication equipment must provide communications on 121.5 MHz (JAR-OPS 1.850 / 3.850)	x	x	x	x	x
LO	State the requirements regarding the provision of an audio selector panel (JAR-OPS 1.855 / 3.855)	x	x	x	x	x
LO	List the requirements for radio equipment when flying under VFR by reference to visual landmarks (JAR-OPS 1.860 / 3.860)	x	x	x	x	x

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		ATPL	CPL	ATPL/IR	ATPL	
LO	List the requirements for communications and navigation equipment when operating under IFR or under VFR over routes not navigated by reference to visual landmarks (JAR-OPS 1.865 / 3.865)	X	X	X	X	X
LO	State the equipment required to operate within RVSM airspace (JAR-OPS 1.872)	X	X			
071 01 02 08	JAR-OPS Subpart M - Aeroplane/Helicopter Maintenance	X	X	X	X	X
LO	State the general requirements (JAR-OPS 1.875 / 3.875)	X	X	X	X	X
LO	Define the terms : Pre-flight inspection, Approved standard, Approved by the authority (JAR-OPS 1.880 / 3.880)	X	X	X	X	X
LO	Explain the operator responsibility in ensuring the aircraft airworthiness and equipment serviceability (JAR-OPS 1.890 / 3.890)	X	X	X	X	X
LO	State the general requirements for ensuring that maintenance is carried out to an appropriate standard (JAR-OPS 1.895 / 3.895)	X	X	X	X	X
LO	Describe the operation of a maintenance quality system (JAR-OPS 1.900 / 3.900)	X	X	X	X	X
LO	Describe the operator's responsibility regarding an aircraft maintenance program (JAR-OPS 1.910 / 3.910)	X	X	X	X	X
LO	List the requirements for maintenance records (JAR-OPS 1.920 / 3.920)	X	X	X	X	X
071 01 02 09	JAR-OPS Subpart N - Flight crew	X	X	X	X	X
LO	State the requirement regarding crew composition and in flight relief (JAR-OPS 1.940 / 3.940)	X	X	X	X	X
LO	State the requirement for conversion training and checking (JAR-OPS 1.945 / 3.945)	X	X	X	X	X
LO	State the requirement for differences training and familiarization training (JAR-OPS 1.950 / 3.950)	X	X	X	X	X
LO	State the conditions for upgrade to commander from co-pilot (JAR-OPS 1.955 / 3.955)	X	X	X	X	X
LO	State the minimum qualification requirements to operate as a commander (JAR-OPS 1.960 / 3.960)	X	X	X	X	X

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		ATPL	CPL	ATPL/IR	ATPL		CPL
LO	State the requirement for recurrent training and checking (JAR-OPS 1.965 / 3.965)	x	x	x	x	x	
LO	State the requirement for a pilot to operate in either pilot's seat (JAR-OPS 1.968 / 3.968)	x	x	x	x	x	
LO	State the minimum recent experience for commander and pilots (JAR-OPS 1.970 / 3.970)	x	x	x	x	x	
LO	Specify the route and aerodrome / heliport qualification required for a commander or a pilot flying (JAR-OPS 1.975 / 3.975)	x	x	x	x	x	
LO	State the requirement to Operate on more than one type or variant (JAR-OPS 1.980 / 3.980)	x	x	x	x	x	
LO	State that when a flight crew member operates both helicopters and aeroplanes , the operations are limited to one type of each (JAR-OPS 1.981)	x	x				
LO	State the training records requirement (JAR-OPS 1.985 / 3.985)	x	x	x	x	x	
071 01 02 10	JAR-OPS Subpart O - Cabin crew/Crew members other than flight crew	x	x	x	x	x	
LO	State who is regarded as cabin crew for application of this subpart (JAR-OPS 1.988 / 3.988)	x	x	x	x	x	
LO	Detail the requirements regarding cabin crew members (JAR-OPS 1.990 / 3.990)	x	x	x	x	x	
LO	State the acceptability criteria (JAR-OPS 1.995 / 3.995)	x	x	x	x	x	
LO	State the requirements regarding senior cabin crew members (JAR-OPS 1.1000 / 3.1000)	x	x	x	x	x	
LO	Explain the requirements for initial and conversion training (JAR-OPS 1.1010 + Appendix 1 / 3.1010)	x	x	x	x	x	
LO	State the requirements for recurrent training (JAR-OPS 1.1015 / 3.1015)	x	x	x	x	x	
LO	State the requirements for refresher training (JAR-OPS 1.1020 / 3.1020)	x	x	x	x	x	
LO	State the conditions to operate on more than one type or variant (JAR-OPS 1.1030 / 3.1030)	x	x	x	x	x	
071 01 02 11	JAR-OPS Subpart P - Manuals, logs and records	x	x	x	x	x	
LO	Explain the general rules for operations manual (JAR-OPS 1.1040 / 3.1040)	x	x	x	x	x	
LO	Explain the structure and subject headings of the operations manual (JAR-OPS 1.1045 + Appendix 1 / 3.1045 + Appendix 1)	x	x	x	x	x	

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	State the requirements for a journey log book (JAR-OPS 1.1055 / 3.1055)	x	x	x	x	x
LO	Describe the requirements regarding the operational flight plan (JAR-OPS 1.1060 / 3.1060)	x	x	x	x	x
LO	State the requirements for document storage periods (JAR-OPS 1.1065 + Appendix 1 / 3.1065 + Appendix 1)	x	x	x	x	x
071 01 02 12	JAR-OPS Subpart Q - Flight and duty time limitations and rest requirements (JAR-OPS 1.1030 / 3.1030)	x	x	x	x	x
LO	Reserved					
071 01 03 00	Long-range flights					
071 01 03 01	Flight management	x				
LO	Navigation planning procedures (JAR-OPS 1.240-241) <ul style="list-style-type: none"> - Describe the operator's responsibilities concerning ETOPS routes - List the factors to be considered by the commander before commencing the flight 	x				
LO	Selection of a route <ul style="list-style-type: none"> - Describe the meaning of the term "adequate aerodrome" (JAR-OPS 1.220 + IEM) - Describe the limitations imposed by JAR-OPS on extended range operations with two-engined aeroplanes with and without ETOPS approval (JAR-OPS 1.245-246) 	x				
LO	Selection of cruising altitude (MNPSA Manual Chapter 4) <ul style="list-style-type: none"> - Specify appropriate cruising levels for normal long range IFR flights and for those operating on the North Atlantic Operational Track Structure 	x				

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR	
		ATPL	CPL	ATPL/IR	ATPL		CPL
LO	Selection of alternate aerodrome (JAR-OPS 1.225 / 1.295-297) <ul style="list-style-type: none"> - State the circumstances in which a take-off alternate must be selected - State the maximum flight distance of a take-off alternate for : two-engined aeroplane, ETOPS approved aeroplane, three or four engined aeroplane - State the factors to be considered in the selection of a take-off alternate - State when a destination alternate need not be selected - State when two destination alternates must be selected - State the factors to be considered in the selection of a destination alternate aerodrome - State the factors to be considered in the selection of an en-route alternate aerodrome 	x					
LO	Minimum time routes <ul style="list-style-type: none"> - Define, construct, interpret minimum time route (route giving the shortest flight time from departure to destination adhering to all ATC and airspace restrictions) 	x					
071 01 03 02	Transoceanic and polar flight	x					

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	(ICAO Doc 7030) <ul style="list-style-type: none"> - Describe the possible indications of navigation system degradation - Describe by what emergency means course and INS can be cross checked in the case of : 3 navigation systems, 2 navigation systems - Interpret VOR, NDB, VOR/DME information to calculate aircraft position and aircraft course - Describe the general ICAO procedures applicable in North Atlantic airspace (NAT) if the aircraft is unable to continue the flight in accordance with its air traffic control clearance - Describe the ICAO procedures applicable in North Atlantic Airspace (NAT) in case of radio communication failure - Describe the recommended initial action if an aircraft is unable to obtain a revised air traffic control clearance - Describe the subsequent action for : aircraft able to maintain assigned flight level, aircraft unable to maintain assigned flight level - Determination of tracks and courses for random routes in NAT - Specify the method by which planned tracks are defined (by latitude and longitude) in the NAT region : when operating predominately in an east-west direction south of 70°N, when operating predominately in an east-west direction north of 70°N - State the maximum flight time recommended between significant points - Specify the method by which planned tracks are defined for flights operating predominantly in a north-south direction - Describe how the desired route must be specified in the air traffic control flight plan 	X					

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR	
		ATPL	CPL	ATPL/IR	ATPL		CPL
LO	Polar navigation Terrestrial magnetism characteristics in polar zones <ul style="list-style-type: none"> - Explain why magnetic compasses become unreliable or useless in polar zones - State in which area VORs are referenced to true north Specific problems of polar navigation <ul style="list-style-type: none"> - Describe the general problems of polar navigation - Describe what precautions can be taken when operating in the area of compass unreliability as a contingency against INS failure - Describe how grid navigation can be used in conjunction with a Directional Gyro (DG) in polar areas and: - Use Polar Stereographic chart and grid co-ordinates to solve polar navigation problems - Use Polar Stereographic chart and grid co-ordinates to calculate navigation data - Use INS information to solve polar navigation problems - Define, calculate: Transport precession, earth rate (astronomic) precession, convergence factor - Describe the effect of using a free gyro to follow a given course - Describe the effect of using a gyro compass with hourly rate corrector unit to follow a given course - Convert grid navigation data into true navigation data, into magnetic navigation data, into compass navigation data - Justify the selection of a different "north" reference at a given position - Calculate the effects of gyro drift due to Earth rotation ($15^\circ / h \times \sin L_m$) 	x					
071 01 03 03	MNPS Airspace	x					
LO	Geographical limits : State the lateral dimensions (in general terms) and vertical limits of MNPS airspace (ICAO Doc 7030 NAT/RAC-2 3.2.1)	x					
	State that operators must ensure that crew follow NAT MNPSA Operations Manual procedures (ICAO Doc 7030 NAT/RAC-2 3.2.3)						

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	Define the following abbreviations : MNPS, MNPSA, OCA, OTS, PRM, PTS, RVSM, LRNS, MASPS, SLOP, WATRS (MNPSA Manual Glossary of terms)	x				
LO	Aircraft System Requirements (MNPSA Manual Chap 1) <ul style="list-style-type: none"> - Navigation requirements for unrestricted MNPS airspace operations - Routes for use by aircraft not equipped with two LRNSs : routes for aircraft with only one LRNS, routes for aircraft with short-range navigation equipment only - Performance Monitoring 	x				
LO	Organised Track System (MNPSA Manual Chap 2) <ul style="list-style-type: none"> - Construction of the organised track system (OTS) - The NAT track message - OTS changeover periods 	x				
LO	Other Routes and Route Structures Within or Adjacent to NAT MNPS Airspace (MNPSA Manual Chap 3) <ul style="list-style-type: none"> - Other routes within NAT MNPS airspace - Route structures adjacent to NAT MNPS airspace : North american routes (NARs), Canadian domestic track systems, Routes between north america and the caribbean area 	x				
LO	Flight Planning (MNPSA Manual Chap 4) <ul style="list-style-type: none"> - All flights should plan to operate on great circle tracks joining successive significant waypoints - During the hours of validity of the OTS, operators are encouraged to flight plan as follows : in accordance with the OTS or along a route to join or leave an outer track of the OTS or on a random route to remain clear of the OTS - Flight levels available on OTS tracks during OTS periods - Flight levels on random tracks or outside OTS periods (Appropriate Direction Levels) 	x				

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	<p>Oceanic ATC Clearances (MNPSA Manual Chap 5)</p> <ul style="list-style-type: none"> - It is recommended that pilots should request their Oceanic Clearance at least 40 minutes prior to the Oceanic entry point ETA - The pilot should notify the OAC of the maximum acceptable flight level possible at the boundary - At some airports situated close to oceanic boundaries, the Oceanic Clearance must be obtained before departure - If an aircraft, which would normally be RVSM and/or MNPS approved, encounters, whilst en route to the NAT Oceanic Airspace, a critical in-flight equipment failure, or at dispatch is unable to meet the MEL requirements for RVSM or MNPS approval on the flight, then the pilot must advise ATC at initial contact when requesting Oceanic Clearance. - After obtaining and reading back the clearance, the pilot should monitor the forward estimate for oceanic entry, and if this changes by 3 minutes or more, should pass a revised estimate to ATC. - Pilots should pay particular attention when the issued clearance differs from the Flight Plan as a significant proportion of navigation errors investigated in the NAT involve an aircraft which has followed its Flight Plan rather than its differing clearance. - If the entry point of the oceanic route on which the flight is cleared differs from that originally requested and/or the oceanic flight level differs from the current flight level, the pilot is responsible for requesting and obtaining the necessary domestic re-clearance - There are three elements to an Oceanic Clearance: route, Mach Number and flight level. These elements serve to provide for the three basic elements of separation: lateral, longitudinal and vertical. 	X				

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	<p>Communications and Position Reporting Procedures (MNPSA Manual Chap 6)</p> <p>HF Voice Communications</p> <ul style="list-style-type: none"> - Pilots communicate with OACs via aeradio stations staffed by communicators who have no executive ATC authority. Messages are relayed, from the ground station to the air traffic controllers in the relevant OAC for action. - Frequencies from the lower HF bands tend to be used for communications during night-time and those from the higher bands during day-time. - When initiating contact with an aeradio station the pilot should state the HF frequency in use. <p>SATCOM Voice Communications</p> <ul style="list-style-type: none"> - Since oceanic traffic typically communicate with ATC through aeradio facilities, a SATCOM call made due to unforeseen inability to communicate by other means should be made to such a facility rather than the ATC Centre, unless the urgency of the communication dictates otherwise. <p>An air-to-air VHF frequency has been established for world-wide use when aircraft are out of range of VHF ground stations which utilise the same or adjacent frequencies. This frequency, 123.45 MHz, is intended for pilot-to-pilot exchanges of operationally significant information.</p> <p>Standard position report message type.</p> <p>Some aircraft flying in the NAT are required to report MET observations of wind speed and direction plus outside air temperature. Any turbulence encountered should be included in these reports.</p> <p>General guidance for aircraft operating in, or proposing to operate in, the NAT Region, which experience a communications failure : General Provisions, On-board HF Equipment Failure, Poor HF Propagation Conditions, Loss of HF Communications Prior to Entry into the NAT, Loss of HF Communications after Entering the NAT.</p> <p>All turbine-engined aeroplanes having a maximum certificated take-off mass exceeding 5,700 kg or authorized to carry more than 19 passengers are required to carry and operate ACAS II in the NAT Region.</p>	x				

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR	
		ATPL	CPL	ATPL/IR	ATPL		CPL
LO	<p>Application of Mach Number Technique (MNPSA Manual Chap 7)</p> <ul style="list-style-type: none"> - Practical experience has shown that when two or more turbojet aircraft, operating along the same route at the same flight level, maintain the same Mach Number, they are more likely to maintain a constant time interval between each other than when using other methods. - Pilots must ensure that any required corrections to indicated Mach are taken into account when complying with the True Mach number specified in the ATC clearance. - After leaving oceanic airspace pilots must maintain their assigned Mach Number in domestic controlled airspace unless and until the appropriate ATC unit authorises a change. 	x					
LO	<p>MNPS Flight Operation & Navigation Procedures (MNPSA Manual Chap 8)</p> <ul style="list-style-type: none"> - The Pre-flight Procedures for any NAT MNPS flight must include a UTC time check and resynchronisation of the aircraft master clock. - State the use of the Master Document - State the requirements for position plotting - PRE-FLIGHT PROCEDURES : alignment of IRS, Satellite Navigation Availability Prediction Programme for flights using GNSS LRNS, loading of initial waypoints, flight plan check. - IN FLIGHT PROCEDURES : ATC Oceanic Clearance, entering the MNPS Airspace and Reaching an Oceanic Waypoint, routine monitoring - Strategic Lateral Offset Procedure (SLOP) : state that along a route or track there will be three positions that an aircraft may fly : centreline or one or two miles right. 	x					
LO	<p>RVSM Flight in MNPS Airspace (MNPSA Manual Chap 9)</p> <ul style="list-style-type: none"> - State the altimeter cross-check to be performed before MNPS airspace entry - State the altimeter cross-check to be performed into the MNPS airspace - In NAT MNPS Airspace pilots always have to report to ATC immediately on reaching any new cruising level.. - Crews should report when a 300 ft or more deviation occurs. 	x					

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR	
		ATPL	CPL	ATPL/IR	ATPL		CPL
LO	Navigation System Degradation or Failure (MNPSA Manual Chap 10) For this part consider aircraft equipped with only two operational LRNSs. State requirements for the following situations : <ul style="list-style-type: none"> - One System Fails Before Take-Off - One System Fails Before the OCA Boundary is Reached - One System Fails After the OCA Boundary is Crossed - The Remaining System Fails After Entering MNPS Airspace 	x					
LO	Special Procedures for In-Flight Contingencies (MNPSA Manual Chap 11) General <ul style="list-style-type: none"> - Until a revised clearance is obtained the specified NAT in-flight contingency procedures should be carefully followed. - The general concept of these NAT in-flight contingency procedures is, whenever operationally feasible, to offset from the assigned route by 15 NM and climb or descend to a level which differs from those normally used by 500 ft if below FL410 or by 1000 ft if above FL410. - State factors which may affect the direction of turn : direction to an alternate airport, terrain clearance, levels allocated on adjacent routes or tracks and any known SLOP off sets adopted by other nearby traffic. Deviations around severe weather <ul style="list-style-type: none"> - State that if the deviation is to be greater than 10NM the assigned flight level must be changed by +/- 300 ft depending on the followed track and the direction of the deviation (table 1) 	x					
071 01 03 04	ETOPS	x					
LO	State that ETOPS approval is part of an AOC (JAR-OPS 1.175 Appendix 1)	x					
LO	State that prior to conducting an ETOPS flight, an operator shall ensure that a suitable ETOPS en-route alternate is available, within either the approved diversion time or a diversion time based on the MEL generated serviceability status of the aeroplane, whichever is shorter. (JAR-OPS 1.246)	x					
LO	State the requirements for take-off alternate. (JAR-OPS 1.295)	x					

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State the planning minima for ETOPS en-route alternate. (JAR-OPS 1.297)	x					
071 02 00 00	SPECIAL OPERATIONAL PROCEDURES AND HAZARDS (GENERAL ASPECTS)						
071 02 01 00	Operations Manual						
071 02 01 01	Operating procedures	x	x	x	x	x	
LO	State that all non type-related operational policies, instructions and procedures needed for a safe operation are included in the A part of the Operations Manual (JAR-OPS 1.1045 / 3.1045)	x	x	x	x	x	
LO	State that the following items are included into the A part : De-icing and Anti-icing on the Ground, Adverse and potentially hazardous atmospheric conditions, Wake Turbulence, Incapacitation of crew members, Use of the Minimum Equipment and Configuration Deviation List(s), Security, Handling of accidents and occurrences (JAR-OPS 1.1045 + IEM / 3.1045 + IEM)	x	x	x	x	x	
LO	State that the following items are included into the A part : Altitude alerting system procedures, Ground Proximity Warning System procedures, Policy and procedures for the use of TCAS/ACAS (JAR-OPS 1.1045 + IEM)	x	x				
LO	State that the following items are included into the A part : Rotor downwash (JAR-OPS 3.1045 + IEM)			x	x	x	
LO	Define the following terms : Commencement of flight, Inoperative, MEL, MMEL, Rectification interval (JAR-MMEL/MEL 005)	x	x	x	x	x	
LO	Define the limits of MEL applicability (JAR-MMEL/MEL 001 + ACJ)	x	x	x	x	x	
LO	Identify the responsibilities of the Operator and the Authority with regard to the MEL and MMEL (JAR-OPS 1.030 / 3.030)	x	x	x	x	x	
LO	State the responsibilities of the crew members with regard to MEL (JAR-OPS 1.085 / 3.085)	x	x	x	x	x	
LO	State the responsibilities of the commander with regard to MEL (JAR-OPS 1.290 / 3.290)	x	x	x	x	x	
071 02 01 02	Aeroplane/Helicopter operating matters – type related	x	x	x	x	x	
LO	State that all type-related instructions and procedures needed for a safe operation are included in the B part of the Operations Manual. They will take account of any differences between types, variants or individual aircrafts used by the operator. (JAR-OPS 1.1045 / 3.1045)	x	x	x	x	x	

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State that the following items are included into the B part : 3 Abnormal and emergency procedures, 8 Configuration Deviation List, 9 Minimum Equipment List, 11 Emergency evacuation procedures (JAR-OPS 1.1045 + IEM)	x	x				
LO	State that the following items are included into the B part : 2 Emergency procedures, 8 Configuration Deviation List, 9 Minimum Equipment List, 11 Emergency evacuation procedures (JAR-OPS 3.1045 + IEM)			x	x	x	
071 02 02 00	Icing conditions	x	x	x	x	x	
071 02 02 01	On ground de-icing/anti-icing procedures, types of de-icing/anti-icing fluids	x	x	x	x	x	
LO	Define the following terms : Anti-icing, De-icing, One-step de-icing/anti-icing, Two-step de-icing/anti-icing, Holdover time. (ICAO Doc 9640 Glossary)	x	x				
LO	Define the following weather conditions : Drizzle, Fog, Freezing fog, Freezing drizzle, Freezing rain, Frost, Rain, Rime, Slush, Snow, Dry snow, Wet snow. (ICAO Doc 9640 Glossary)	x	x	x	x	x	
LO	All the chapter regarding "The clean aircraft concept" of the ICAO Doc 9640 must be known. (ICAO Doc 9640 Chap 2)	x	x				
LO	List the types of de-icing/anti-icing fluids available. (ICAO Doc 9640 Chap 4)	x	x	x	x	x	
LO	State that when an aeroplane that has previously been anti-iced need to apply another coating of anti-icing fluid, the aeroplane surfaces must first be de-iced before the final coating of anti-icing fluid is applied. (ICAO Doc 9640 Chap 4)	x	x				
LO	Interpret the fluid holdover time tables and list the factors which can reduce the fluid protection time. (ICAO Doc 9640 Chap 5 + Attachment tables)	x	x				
LO	State that the pre-take-off check, which is the responsibility of the pilot-in-command, ensures that the critical surfaces of the aeroplane are free of ice, snow, slush or frost just prior to take-off. This check shall be accomplished as close to the time of take-off as possible and is normally made from within the aeroplane by visually checking the wings. (ICAO Doc 9640 Chap 6)	x	x				
LO	State that an aircraft has to be treated symmetrically. (ICAO Doc 9640 Chap 11)	x	x				
LO	State that an operator shall establish procedures to be followed when ground de-icing and anti-icing and related inspections of the aeroplane(s) are necessary. (JAR-OPS 1.345 / 3.345)	x	x	x	x	x	

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Stater that a commander shall not commence take-off unless the external surfaces are clear of any deposit which might adversely affect the performance and/or controllability of the aircraft except as permitted in the Flight Manual. (JAR-OPS 1.345 / 3.345)	x	x	x	x	x	
071 02 02 02	Procedure to apply in case of performance deterioration, on ground/in flight	x	x	x	x	x	
LO	State that the effects of icing are wide-ranging, unpredictable and dependent upon individual aeroplane design. The magnitude of these effects is dependent upon many variables, but the effects can be both significant and dangerous. (ICAO Doc 9640 Chap 1)	x	x	x	x	x	
LO	State that in icing conditions wing lift can be reduced by asmuch as 30 percent and drag increased by up to 40 percent. State that these changes in lift and drag will significantly increase stall speed, reduce controllability and alter flight characteristics. (ICAO Doc 9640 Chap 1)	x	x	x	x	x	
LO	State that ice on critical surfaces and on the airframe may also break away during take-off and be ingested into engines, possihly damaging fan and compressor blades. (ICAO Doc 9640 Chap 1)	x	x	x	x	x	
LO	State that ice forming on pitot tubes and static ports or on angle of attack vanes may give false attitude, airspeed, angle of attack and engine power information for air data systems. (ICAO Doc 9640 Chap 1)	x	x	x	x	x	
LO	State that ice, frost and snow formed on the critical surfaces on the ground can have a totally different effect on aircraft flight characteristics than ice formed in flight. (ICAO Doc 9640 Chap 1)	x	x	x	x	x	
LO	State that flight in known icing conditions is subject to limitations found in the B part of the Operations Manual. (JAR-OPS 1.1045 Appendix 1 / 3.1045 Appendix 1)	x	x	x	x	x	
LO	State where procedures and performances regarding flight in expected or actual icing conditions are located. (JAR-OPS 1.346 ACJ / 3.346 ACJ)	x	x	x	x	x	
071 02 03 00	Bird strike risk and avoidance	x	x	x	x	x	
LO	State that presence of birds constituting a potential hazard to aircraft operations is part of pre-flight information. (ICAO Annex 15 - Chap 8)	x	x	x	x	x	

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	State that information concerning the presence of birds observed by aircrews is made available to the aeronautical information service for such distribution as the circumstances necessitate. (ICAO Annex 15 - Chap 8)	x	x	x	x	x
LO	State that AIP ENR 5.6 contains informations regarding bird migrations. (ICAO Annex 15 - Appendix 1)	x	x	x	x	x
LO	State significant data regarding birds strike contained in ICAO Doc 9137. (ICAO Doc 9137 - Part 3 - 1.1.6)	x	x	x	x	x
LO	State incompatible land use around airports. (ICAO Doc 9137 - Part 3 - 10.4)	x	x	x	x	x
LO	Define the commander's responsibilities regarding the reporting of bird hazards and bird strikes. (JAR-OPS 1.420 / 3.420)	x	x	x	x	x
071 02 04 00	Noise abatement					
071 02 04 01	Noise abatement procedures	x	x	x	x	x
LO	Define the operator responsibilities regarding establishment of noise abatement procedures. (JAR-OPS 1.235 / 3.235)	x	x	x	x	x
LO	State the main purpose of NAPD 1 and NAPD 2. (ICAO Doc 8168 - Vol 1 - Part V - 3.1.1)	x	x	x	x	x
LO	State that the pilot-in-command has the authority to decide not to execute a noise abatement departure procedure if conditions preclude the safe execution of the procedure. (ICAO Doc 8168 - Vol 1 - Part V - 3.2.1.3)	x	x	x	x	x
071 02 04 02	Influence of the flight procedure (departure, cruise, approach)	x	x	x	x	x
LO	List the main parameters for NAPD 1 and NAPD 2 (ie : speeds, heights, etc...). (ICAO Doc 8168 - Vol 1 - Part V - Appendix to chapter 3)	x	x			
LO	State that a runway lead-in lighting system should be provided where it is desired to provide visual guidance along a specific approach path for purposes of noise abatement. (ICAO Annex 14 - Vol 1 - 5.3.7.1 / Vol 2 - 5.3.4.1)	x	x	x	x	x
LO	State that detailed information about noise abatement procedures is to be found into the AD 2 and 3 of the AIP. (ICAO Annex 15 Appendix 1)	x	x	x	x	x

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
071 02 04 03	Influence by the pilot (power setting, low drag)	x	x				
LO	List the adverse operating conditions under which noise abatement procedures in the form of reduced power take-off should not be required. (ICAO Doc 8168 - Vol 1 - Part V - 3.2.2)	x	x				
LO	List the adverse operating conditions under which noise abatement procedures during approach should not be required. (ICAO Doc 8168 - Vol 1 - Part V - 3.4.4)	x	x				
LO	State the rule regarding use of reverse thrust on landing (ICAO Doc 8168 - Vol 1 - Part V - 3.5)	x	x				
071 02 04 04	Influence by the pilot (power setting, track of helicopter)			x	x	x	
LO	List the adverse operating conditions under which noise abatement procedures in the form of reduced power take-off should not be required. (ICAO Doc 8168 - Vol 1 - Part V - 3.2.2)			x	x	x	
071 02 05 00	Fire/smoke						
071 02 05 01	Carburettor fire	x	x				
LO	List the actions to be taken in the event of a carburetor fire	x	x				
071 02 05 02	Engine fire	x	x				
LO	List the actions to be taken in the event of an engine fire	x	x				
071 02 05 03	Fire in the cabin, cockpit, cargo compartment	x	x				
LO	Identify the different types of extinguishant and the type of fire on which each one may be used	x	x				
LO	Describe the precautions to be considered in the application of fire extinguishant	x	x				
LO	Identify the appropriate hand held extinguishers to be uses in the cockpit, the passenger cabin and toilets, the cargo compartments	x	x				
071 02 05 04	Smoke in the cockpit and cabin	x	x				
LO	List the actions to be taken in the event of smoke in the cockpit or in the cabin	x	x				
071 02 05 05	Actions in case of overheated brakes	x	x				

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe the problems and safety precautions following overheated brakes after landing or a rejected take-off	x	x				
071 02 06 00	Decompression of pressurised cabin						
071 02 06 01	Slow decompression	x	x				
LO	Indicate how to detect a slow decompression or an automatic pressurisation system failure	x	x				
LO	Describe the actions required following a slow decompression	x	x				
071 02 06 02	Rapid and explosive decompression	x	x				
LO	Indicate how to detect a rapid or an explosive decompression	x	x				
LO	Describe the actions required following a rapid or explosive decompression	x	x				
071 02 06 03	Dangers and action to be taken	x	x				
LO	Describe the effects on aircraft occupants of a slow decompression and a rapid or explosive decompression	x	x				
071 02 07 00	Wind shear and microburst						
071 02 07 01	Effects and recognition during departure and approach	x	x	x	x	x	
LO	Define the meaning of the term "low level windshear" (ICAO Circular 186 - Chapter 1)	x	x	x	x	x	
LO	Define : Vertical windshear, Horizontal windshear, Updraft and downdraft windshear (ICAO Circular 186 - Chapter 2)	x	x	x	x	x	
LO	Identify the meteorological phenomena associated with windshear (ICAO Circular 186 - Chapter 3)	x	x	x	x	x	
LO	Explain recognition of windshear (ICAO Circular 186 - Chapter 4)	x	x	x	x	x	
071 02 07 02	Actions to avoid and actions taken during encounter	x	x	x	x	x	
LO	Describe the effects of and actions required when encountering windshear, at take-off and approach (ICAO Circular 186 - Chapter 4)	x	x	x	x	x	

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe the precautions to be taken when windshear is suspected, at take-off and approach (ICAO Circular 186 - Chapter 4)	x	x	x	x	x	
LO	Describe the effects of and actions required following entry into a strong downdraft windshear (ICAO Circular 186 - Chapter 4)	x	x	x	x	x	
LO	Describe a microburst and its effects (ICAO Circular 186 - Chapter 4)	x	x	x	x	x	
071 02 08 00	Wake turbulence						
071 02 08 01	Cause	x	x	x	x	x	
LO	Define the term "wake turbulence" (ICAO Doc 4444 4.9)	x	x	x	x	x	
LO	Describe tip vortices circulation (ICAO Doc 9426 Part II)	x	x	x	x	x	
LO	Explain when vortex generation begins and ends (ICAO Doc 9426 Part II)	x	x	x	x	x	
LO	Describe vortex circulation on the ground with and without crosswind (ICAO Doc 9426 Part II)	x	x	x	x	x	
071 02 08 02	List of relevant parameters	x	x	x	x	x	
LO	List the three main factors which combine to give the strongest vortices (heavy, clean, slow) (ICAO Doc 9426 Part II)	x	x	x	x	x	
LO	Describe the wind conditions which are worst for wake turbulence near the ground (ICAO Doc 9426 Part II)	x	x	x	x	x	
071 02 08 03	Actions taken when crossing traffic, during take-off and landing	x	x	x	x	x	
LO	Describe the actions taken to avoid wake turbulence, specially separations (ICAO Doc 4444 5)	x	x	x	x	x	
071 02 09 00	Security (unlawful events)						
071 02 09 01	ICAO Annex 17	x	x	x	x	x	
LO	Give the following definitions : Aircraft security check, screening, security, security restricted area, unidentified baggage (ICAO Annex 17 1)	x	x	x	x	x	
LO	Give the objectives of security (ICAO Annex 17 2.1)	x	x	x	x	x	
071 02 09 02	Use of SSR	x	x	x	x	x	

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	Describe the commander's responsibilities concerning notifying the appropriate ATS unit (ICAO Annex 17 Attachment)	X	X	X	X	X
LO	Describe the commander's responsibilities concerning operation of SSR (ICAO Annex 17 Attachment)	X	X	X	X	X
LO	Describe the commander's responsibilities concerning departing from assigned track and/or cruising level (ICAO Annex 17 Attachment)	X	X	X	X	X
LO	Describe the commander's responsibilities concerning action required or being requested by an ATS unit to confirm SSR code and ATS interpretation response (ICAO Annex 17 Attachment)	X	X	X	X	X
071 02 09 03	JAR-OPS Subpart S - Security	X	X	X	X	X
LO	State JAR-OPS requirement regarding training programs (JAR-OPS 1.1240 / 3.1240)	X	X	X	X	X
LO	State JAR-OPS requirement regarding reporting acts of unlawful interference (JAR-OPS 1.1245 / 3.1245)	X	X	X	X	X
LO	State JAR-OPS requirement regarding aircraft search procedures (JAR-OPS 1.1250 / 3.1250)	X	X	X	X	X
071 02 10 00	Emergency and precautionary landings					
071 02 10 01	Definition	X	X	X	X	X
LO	Define ditching, precautionary landing, emergency landing	X	X	X	X	X
LO	Describe a ditching procedure	X	X	X	X	X
LO	Describe a precautionary landing	X	X	X	X	X
LO	Explain the factors to be considered when deciding to make a precautionary/emergency landing or ditching	X	X	X	X	X
071 02 10 02	Cause	X	X	X	X	X
LO	List some reasons that may request a ditching, a precautionary landing or an emergency landing.	X	X	X	X	X
071 02 10 03	Passenger information	X	X	X	X	X

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe the passenger briefing to be given before making a precautionary/emergency landing or ditching (including evacuation)	x	x	x	x	x	
071 02 10 04	Action after landing	x	x	x	x	x	
LO	Describe the actions and responsibilities of crew members after landing	x	x	x	x	x	
071 02 10 05	Evacuation	x	x	x	x	x	
LO	State that the aircraft must be stopped and the engine shut-down before launching an emergency evacuation.	x	x	x	x	x	
LO	State that evacuation procedures are to be found in the B part of the Operations Manual. (JAR-OPS 1.1045 Appendix 1 / 3.1045 Appendix 1)	x	x	x	x	x	
071 02 11 00	Fuel jettisoning						
071 02 11 01	Safety aspects	x	x				
LO	State that an aircraft may need to dump fuel so as to reduce it's landing mass in order to effect a safe landing. (ICAO Doc 4444 15.5.3)	x	x				
LO	State that when an aircraft operating within controlled airspace needs to dump fuel, the flight crew shall coordinate with ATC the following : route to be flown, which, if possible, should be clear of cities and towns, preferably over water and away from areas where thunderstorms have been reported or are expected, the level to be used, which should be not less than 1 800 m (6 000 ft) and the duration of the fuel dumping. (ICAO Doc 4444 15.5.3)	x	x				
LO	State that flaps and slats may adversely affect fuel jettisoning. (EASA CS-25 1001)	x	x				
071 02 11 02	Requirements	x	x				
LO	State that a fuel jettisoning system must be installed on each aeroplane unless it is shown that the aeroplane meets some CS-25 climb requirements. (EASA CS-25 1001)	x	x				
LO	State that a fuel jettisoning system must be capable of jettisoning enough fuel within 15 minutes. (EASA CS-25 1001)	x	x				
071 02 12 00	Transport of dangerous goods						
071 02 12 01	ICAO Annex 18	x	x	x	x	x	

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	Give the following definitions : Dangerous goods, Dangerous goods accident, Dangerous goods incident, Exemption, Incompatible, Packaging, UN number. (ICAO Annex 18 Chapter 1)	x	x	x	x	x
LO	State that detailed provisions for dangerous goods transportation are contained in the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284). (ICAO Annex 18 Chapter 2 2.2.1)	x	x	x	x	x
LO	State that in case of an in-flight emergency, the pilot-in-command must inform the ATC of dangerous goods transportation (ICAO Annex 18 Chapter 9 9.5)	x	x	x	x	x
071 02 12 02	Technical instructions (ICAO Doc 9284)	x	x	x	x	x
LO	Explain the principle of compatibility and segregation (ICAO Doc 9284)	x	x	x	x	x
LO	Explain the special requirements for loading of radioactive materials (ICAO Doc 9284)	x	x	x	x	x
LO	Explain the use of the dangerous goods list (ICAO Doc 9284)	x	x	x	x	x
LO	Identify the labels. (ICAO Doc 9284)	x	x	x	x	x
071 02 12 03	JAR-OPS Subpart R - Transport of dangerous goods by air	x	x	x	x	x
LO	State that dangerous goods transportation is subject to approval of the operator (JAR-OPS 1.1155 / 3.1155)	x	x	x	x	x
LO	Identify articles and substances which would otherwise be classed as dangerous goods that are excluded from the provisions of the JAR-OPS Subpart R (JAR-OPS 1.1160 / 3.1160)	x	x	x	x	x
LO	State that some articles and substances may be forbidden for air transportation (JAR-OPS 1.1165 / 3.1165)	x	x	x	x	x
LO	State that packing must comply with the Technical Instruction specifications (JAR-OPS 1.1175 / 3.1175)	x	x	x	x	x
LO	State the labelling and marking requirements (JAR-OPS 1.1180 / 3.1180)	x	x	x	x	x
LO	State the Dangerous Goods Transport Document requirements (JAR-OPS 1.1185 / 3.1185)	x	x	x	x	x
LO	State the Acceptance of Dangerous Goods requirements (JAR-OPS 1.1195 / 3.1195)	x	x	x	x	x
LO	Explain the need of an inspection prior to loading on an aircraft (JAR-OPS 1.1200 / 3.1200)	x	x	x	x	x

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	State that some dangerous goods are designated for carriage only on cargo aircrafts. (JAR-OPS 1.1210 / 3.1210)	x	x	x	x	x
LO	State that accidents or incidents involving dangerous goods are to be reported. (JAR-OPS 1.1225 / 3.1225)	x	x	x	x	x
LO	State that misdeclared or undeclared dangerous goods found in the baggages are to be reported. (JAR-OPS 1.1225 / 3.1225)	x	x	x	x	x
071 02 13 00	Contaminated runways					
071 02 13 01	Kinds of contamination	x	x			
LO	Define a contaminated runway, a damp runway, a wet runway, a dry runway (JAR-OPS 1.480)	x	x			
LO	List the different types of contamination : damp, wet or water patches, rime or frost covered, dry snow, wet snow, slush, ice, compacted or rolled snow, frozen ruts or ridges (ICAO Annex 15 Appendix 2)	x	x			
LO	Give the definitions of the various types of snow (ICAO Annex 15 Appendix 2)	x	x			
071 02 13 02	Estimated surface friction, friction coefficient	x	x			
LO	State difference between friction coefficient and estimated surface friction (ICAO Annex 15 Appendix 2)	x	x			
LO	State that when friction coefficient is 0.40 or higher the expected braking action is good (ICAO Annex 15 Appendix 2)	x	x			
071 02 13 03	Hydroplaning principles and effects	x	x			
LO	Define the different types of hydroplaning	x	x			
LO	Compute the dynamic hydroplaning speed using one of the following formulas : Speed(kt) = 34 square root (Pressure in Bar or kg/cm ²) Speed(kt) = 9 square root (Pressure in PSI)	x	x			
071 02 13 04	Procedures	x	x			

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter			IR
		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State that some wind limitations may apply in case of contaminated runways. Those limitations are to be found in the B part of the Operations Manual - Limitations (JAR-OPS 1.1045 Appendix 1)	x	x				
LO	State that the procedures associated with take-off and landing on contaminated runways are to be found in the B part of the Operations Manual – Normal procedures (JAR-OPS 1.1045 Appendix 1)	x	x				
LO	State that the performances associated with contaminated runways are to be found in the B part of the Operations Manual – Performance (JAR-OPS 1.1045 Appendix 1)	x	x				
071 02 13 05	Snowtam	x	x				
LO	Interpret from a snowtam the contamination and braking action on a runway	x	x				
071 02 14 00	Rotor downwash						
071 02 14 01	Describe downwash			x	x	x	
LO	Describe the downwash			x	x	x	
071 02 14 02	Effects			x	x	x	
LO	Explain the effects on : Soil erosion, Water dispersal and spray, Recirculation, Damage to property, Loose articles			x	x	x	
071 02 15 00	Operation influence by meteorological conditions (Helicopter)						
071 02 15 01	White out/sand/dust			x	x	x	
LO	Give the definition of white out			x	x	x	
LO	Describe loss of spatial orientation			x	x	x	
LO	Describe take-off and landing techniques			x	x	x	
071 02 15 02	Strong winds			x	x	x	
LO	Describe blade sailing			x	x	x	
LO	Describe wind operating envelopes			x	x	x	

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Syllabus reference	Syllabus details and associated Learning Objectives	Aeroplane		Helicopter		IR
		ATPL	CPL	ATPL/IR	ATPL	
LO	Describe vertical speed problems			X	X	X
071 02 15 03	Mountain environment			X	X	X
LO	Describe constraints associated with mountain environment			X	X	X
071 03 00 00	EMERGENCY PROCEDURES (HELICOPTER)					
071 03 01 00	Influence by technical problems					
071 03 01 01	Engine failure			X	X	X
LO	Describe techniques for failure in : hover, climb, cruise, approach			X	X	X
071 03 01 02	Fire in cabin/cockpit/engine			X	X	X
LO	Describe basic actions when encountering fire in cabin, cockpit or engine			X	X	X
071 03 01 03	Tail/rotor/directional control failure			X	X	X
LO	Describe basic actions following the loss of tail rotor			X	X	X
LO	Describe basic actions following loss of directional control			X	X	X
071 03 01 04	Ground resonance			X	X	X
LO	Describe recovery actions			X	X	X
071 03 01 05	Blade stall			X	X	X
LO	Describe cause and recovery actions when encountering retreating blade stall			X	X	X
071 03 01 06	Settling with power (vortex ring)			X	X	X
LO	Describe pre-requisite conditions and recovery actions			X	X	X
071 03 01 07	Overpitch			X	X	X
LO	Describe recovery actions			X	X	X
071 03 01 08	Overspeed: rotor/engine			X	X	X

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		ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe overspeed control			X	X	X	
071 03 01 09	Dynamic rollover			X	X	X	
LO	Describe potential conditions and recovery action			X	X	X	
071 03 01 10	Mast bumping			X	X	X	
LO	Describe conditions conducive to and avoidance of effect			X	X	X	