

NYÍREGYHÁZI EGYETEM
Műszaki és Agrártudományi Intézet
Közlekedéstudományi és
Infotechnológiai Tanszék

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FOGLALKOZÁSI TERV

Tanítási hetek száma: 14
Előadás: heti 4 / *3 óra, félévi: 56 / *42 óra
Előadó: Dr. Szilágyi Dénes

A tantárgy kredit értéke: 3/*4
Gyakorlat: heti 1 óra, félévi 14 óra
Gyak. vez.: Dr. Szilágyi Dénes

Számonkérés formája: kollokvium
Zárthelyi dolgozatok száma: 2 **megírásának időpontja:** 13. és 21. hét

Kötelező és ajánlott szakirodalmak:

- AIR-OPS (CAT) (965/2012 EK rendelet, EASA Easy Access Rules Published 12.2025);
- Operational Procedures OXFORD Aviation Services 2020
- Bristol Bristol Groundschool International Limited 2022
- ICAO Annex 6
- Vállalati Repülésvégrehajtási Utasítások / Kézikönyvek (FOM)

A szorgalmi időszak követelményei:

A hallgatók munkájának értékelése az alábbi pontrendszer alapján történik.

Foglalkozásokon a jelenlét, fegyelmezett viselkedés és aktív munkavégzés a TVSz szerint.

Zárthelyi dolgozat 1. szerezhető	25 p
Zárthelyi dolgozat 2. szerezhető	25 p
Vizsgán szerezhető	50 p
A maximálisan elérhető pontszám	100 p

Részfeladatonként min 51%-os teljesítmény elérése kötelező!

Nyíregyháza, 2026.02.06.

Dr. Szilágyi Dénes Ph.D.
tantárgyfelelős

Dr. Sikolya László C.Sc.
tanszékvezető

NAPPALI TAGOZAT

Nap- tári hét	Előadás tárgykör	Óra- szám	Gyakorlat tárgykör	Óra- szám
7. A	<p>Part-CAT definíciók és követelmények.</p> <p>071.01.01.01.01 Define the following: alternate aerodrome: flight time (aeroplanes); take-off alternate; en-route alternate; destination alternate.</p> <p>071.01.01.02.01 State that Part I shall be applicable to the operation of aeroplanes by operators authorised to conduct international commercial air transport (CAT) operations.</p> <p>071.01.01.03.01 Explain the compliance with laws, regulations and procedures.</p> <p>071.01.01.03.02 State the condition(s) required for the establishment of a flight data analysis programme, and state what this programme is part of.</p> <p>071.01.01.03.03 Explain what is a flight safety documents system.</p> <p>071.01.01.03.04 Explain what is maintenance release.</p> <p>071.01.01.03.05 List and describe the lights to be displayed by aircraft.</p> <p>071.01.02.01.01 State the operational regulations applicable to CAT and other activities (e.g. specialised operations (SPO)).</p> <p>071.01.02.01.02 State the nature of CAT operations and exceptions.</p> <p>071.01.02.02.01 Explain why CAT flights must meet the applicable operational requirements.</p> <p>071.01.02.02.06 Explain the requirements about language used for crew communication and in the operations manual.</p>	1-4 *1-3	Alkalmazástechnikai feladatok kiadása. CAT dokumentumok bemutatása.	1
8. B	<p>Az üzemeltető jogosítása és ellenőrzési követelményei, és üzemeltetési eljárások.</p> <p>071.01.02.02.07 Explain which are the operator requirements regarding the management system.</p> <p>071.01.02.02.08 Explain which are the operator requirements regarding accident prevention and the flight safety programme.</p> <p>071.01.02.02.09 Explain which are the regulations concerning the carriage of persons on an aircraft.</p> <p>071.01.02.02.10 Explain the operator's and commander's responsibility concerning portable electronic devices (PEDs).</p> <p>071.01.02.02.11 Explain the operator's and commander's responsibility regarding admission in an aircraft of a person under the influence of drug or alcohol.</p> <p>071.01.02.02.12 Explain the regulations concerning the endangerment of safety.</p> <p>071.01.02.03.01 Explain what requirement has to be satisfied for the issue of an air operator certificate (AOC).</p> <p>071.01.02.03.02 Explain what the rules applicable to air operator certification are.</p> <p>071.01.02.03.03 Explain the conditions to be met for the issue or revalidation of an AOC.</p> <p>071.01.02.03.04 Explain the contents and conditions of the AOC.</p>	5-8 *4-6	A követelményrendszer ismertetése.	2
9. A	<p>Üzemeltetési eljárások.</p> <p>071.01.02.04.01 Define the terms used for operational procedures.</p> <p>071.01.02.04.02 State the operator's responsibilities regarding the use of air traffic services (ATS).</p> <p>071.01.02.04.03 State the operator's responsibilities regarding authorisation of aerodromes/heliports by the operator.</p> <p>071.01.02.04.04 Explain which elements must be considered by the operator when specifying aerodrome/heliport operating minima.</p>	9-12 *7-9	Üzemeltetési eljárások tanulmányozása.	3

Nap-tári hét	Előadás tárgykör	Óra-szám	Gyakorlat tárgykör	Óra-szám
	<p>071.01.02.04.05 Explain what the operator's responsibilities are regarding departure and approach procedures.</p> <p>071.01.02.04.06 Explain which parameters should be considered in noise-abatement procedures.</p> <p>071.01.02.04.07 Explain which elements should be considered regarding routes and areas of operation.</p> <p>071.01.02.04.08 Explain the requirements for flights in reduced vertical separation minima (RVSM) airspace.</p> <p>071.01.02.04.09 List the factors to be considered when establishing minimum flight altitude.</p> <p>071.01.02.04.10 Explain the requirements for carrying persons with reduced mobility.</p> <p>071.01.02.04.11 Explain the operator's responsibilities for the carriage of inadmissible passengers, deportees or persons in custody.</p> <p>071.01.02.04.12 Explain the requirements regarding passenger seating and emergency evacuation.</p> <p>071.01.02.04.13 Detail the procedures for passenger briefing in respect of emergency equipment and exits.</p> <p>071.01.02.04.14 State the flight preparation forms to be completed before flight.</p> <p>071.01.02.04.15 State the commander's responsibilities during flight preparation.</p> <p>071.01.02.04.16 State the rules for aerodrome/heliport selection.</p> <p>071.01.02.04.17 Explain the planning minima for instrument flight rule (IFR) flights.</p> <p>071.01.02.04.18 Explain the rules for refuelling/defueling with passengers on board.</p> <p>071.01.02.04.19 Explain the 'crew members at station' policy.</p> <p>071.01.02.04.20 Explain the use of seats, safety belts and harnesses.</p> <p>071.01.02.04.21 Explain the requirements for securing passenger cabin and galley.</p> <p>071.01.02.04.22 Explain the commander's responsibility regarding smoking on board.</p> <p>071.01.02.04.23 State under which conditions a commander can commence or continue a flight regarding meteorological conditions.</p>			
10. B	<p>Üzemeltetési eljárások.</p> <p>071.01.02.04.24 Explain the commander's responsibility regarding ice and other contaminants.</p> <p>071.01.02.04.25 Explain the commander's responsibility regarding fuel to be carried and in-flight fuel management.</p> <p>071.01.02.04.26 Detail the rules regarding carriage and use of supplemental oxygen for passengers and aircrew.</p> <p>071.01.02.04.27 Explain the commander's responsibility regarding approach and landing.</p> <p>071.01.02.04.28 Explain the circumstances under which a report shall be submitted.</p> <p>071.02.02.01.01 Define the following terms: 'anti-icing', 'de-icing', 'one-step de-icing/anti-icing', 'two-step de-icing/anti-icing', 'holdover time'.</p> <p>071.02.02.01.02 Describe 'the clean aircraft concept' as presented in the relevant chapter of ICAO Doc 9640.</p> <p>071.02.02.01.03 List the types of de-icing/anti-icing fluids available.</p> <p>071.02.02.01.04 Explain the procedure to be followed when an aeroplane has exceeded the holdover time.</p> <p>071.02.02.01.05 Interpret the guidelines for fluid holdover times and list the factors which can reduce the fluid protection time.</p> <p>071.02.02.01.06 Explain how the pre-take-off check, which is the responsibility of the pilot-in-command, ensures that the critical surfaces of the aircraft 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.</p>	13-16 *10-12	Jégtelenítési eljárások tanulmányozása.	4

Nap- tári hét	Előadás tárgykör	Óra- szám	Gyakorlat tárgykör	Óra- szám
	071.02.02.01.07 Explain why an aircraft has to be treated symmetrically.			
	071.02.02.01.08 Explain why an operator shall establish procedures to be followed when ground de-icing and anti-icing and related inspections of the aircraft are necessary.			
	071.02.02.01.09 Explain why a commander shall not commence take-off unless the external surfaces are clear of any deposit which might adversely affect the performance or controllability of the aircraft except as permitted in the flight manual.			
	071.02.02.01.10 Explain the requirements for operations in icing conditions.			
	071.02.02.01.11 Explain why safety must come before commercial pressures in relation to de-icing and anti-icing of aircraft. (Consider time and financial cost versus direct and indirect effects of an incident/accident).			
	071.02.02.02.01 Explain that the effects of icing are wide-ranging, unpredictable and dependent upon individual aircraft design. The magnitude of these effects is dependent upon many variables, but the effects can be both significant and dangerous.			
	071.02.02.02.02 Explain that in icing conditions, for a given speed and a given angle of attack, wing lift can be reduced by as much as 30 % and drag increased by up to 40 %. State that these changes in lift and drag will significantly increase stall speed, reduce controllability, and alter flight characteristics.			
	071.02.02.02.03 Explain that ice on critical surfaces and on the airframe may also break away during take-off and be ingested into engines, possibly damaging fan and compressor blades.			
	071.02.02.02.04 Explain that ice forming on pitot tubes and static ports or on angle-of-attack vanes may give false altitude, airspeed, angle-of-attack and engine-power information for air-data systems.			
	071.02.02.02.05 Explain 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, frost and snow formed in flight.			
	071.02.02.02.06 Explain that flight in known icing conditions is subject to limitations that are contained in Part B of the operations manual.			
	071.02.02.02.07 Explain where procedures and performances regarding flight in expected or actual icing conditions can be found.			
	071.02.03.01.01 Explain that the presence of birds that constitute a potential hazard to aircraft operations is part of the pre-flight information.			
	071.02.03.01.02 Explain how information concerning the presence of birds observed by aircrews is made available to the aeronautical information service (AIS) for distribution as the circumstances dictate.			
	071.02.03.01.03 Explain that the Aeronautical Information Publication (AIP) Section En-route (ENR) 5.6 contains information regarding bird migrations.			
	071.02.03.01.04 Explain significant data regarding bird strikes contained in ICAO Doc 9137 'Airport Services Manual'.			
	071.02.03.01.05 Explain why birds constitute a hazard to aircraft (damage to probes, sensors, windscreens, airframes, degradation in vision, etc.).			
	071.02.03.01.06 Define the commander's responsibilities regarding the reporting of bird hazards and bird strikes.			
	071.02.03.01.07 State that birds tend to flock to areas where food is plentiful. Such areas include: rubbish (garbage) facilities; open sewage treatment works; recently ploughed land; as well as their natural habitats.			

Nap-tári hét	Előadás tárgykör	Óra-szám	Gyakorlat tárgykör	Óra-szám
	071.02.04.01.01 Define the operator's responsibilities regarding the establishment of noise-abatement procedures. 071.02.04.01.02 State the main purpose of noise-abatement departure procedure (NADP) 1 and NADP 2. 071.02.04.01.03 State that the PIC/commander has the authority to decide not to execute an NADP if conditions preclude the safe execution of the procedure. 071.02.04.02.01 List the main parameters for NADP 1 and NADP 2 (i.e. speeds, heights and configuration). 071.02.04.02.02 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 noise-abatement purposes. 071.02.04.02.03 State that detailed information about noise-abatement procedures is to be found in Part 'Aerodromes' (AD), Sections 2 and 3 of the AIP.			
11. A	Üzemeltetési eljárások. 071.02.04.03.01 List the adverse operating conditions under which noise-abatement procedures in the form of reduced-power take-off should not be required 071.02.04.03.02 List the adverse operating conditions under which noise-abatement procedures during approach should not be required. 071.02.04.03.03 State the rule regarding the use of reverse thrust on landing. 071.02.05.01.01 Explain that the actions to be taken in the event of a carburettor fire may be type-specific and should be known by the pilot. 071.02.05.02.01 Explain that the actions to be taken in the event of an engine fire may be type-specific and should be known by the pilot. 071.02.05.03.01 Identify the different types of extinguishants used in handheld fire extinguishers and the type of fire for which each one may be used. 071.02.05.03.02 Describe the precautions to be considered when applying fire extinguishants. 071.02.05.03.03 Identify the appropriate handheld fire extinguishers to be used in the flight crew compartment, the passenger cabin and lavatories, and in the cargo compartments. 071.02.05.04.01 Explain which actions should be taken in the event of smoke in the flight crew compartment or in the cabin, why these actions may be type-specific, and why they should be known by the pilot. 071.02.05.05.01 Describe the problems and safety precautions in the event that brakes overheat after a heavy-weight landing or a rejected take-off. 071.02.05.05.02 Explain the difference in the way steel and carbon brakes react to energy absorption and the operational consequences. 071.02.06.01.01 Explain what can cause, and how to detect, a slow decompression or an automatic pressurisation system failure. 071.02.06.01.02 Describe the actions required following a slow decompression. 071.02.06.02.01 Explain what can cause, and how to detect, a rapid or an explosive decompression. 071.02.06.03.01 Describe the actions required following a rapid or explosive decompression. 071.02.06.03.02 Describe the effects on aircraft occupants of a slow decompression and of a rapid or explosive decompression.	17-20 *13-15	Vészhelyzeti eljárások tanulmányozása.	5

Nap-tári hét	Előadás tárgykör	Óra-szám	Gyakorlat tárgykör	Óra-szám
	071.02.07.01.01 Explain how to identify low-level wind shear.			
	071.02.07.02.01 Describe the effects of wind shear and the actions required when wind shear is encountered at take-off and approach.			
	071.02.07.02.02 Describe the precautions to be taken when wind shear is suspected at take-off and approach.			
	071.02.07.02.03 Describe the effects of wind shear and the actions required following entry into a strong downdraft wind shear.			
	071.02.07.02.04 Describe a microburst and its effects.			
	071.02.08.01.01 Describe the term 'wake turbulence'.			
	071.02.08.01.02 Describe tip vortex circulation.			
	071.02.08.01.03 State when vortex generation begins and ends.			
	071.02.08.01.04 Describe vortex circulation on the ground with and without crosswind.			
	071.02.08.02.01 List the three main factors which, when combined, give the strongest vortices (heavy, clean, slow).			
	071.02.08.02.02 Describe the wind conditions which are worst for wake turbulence near the ground.			
	071.02.08.03.01 Describe the actions to be taken to avoid wake turbulence, specifically separations.			
	071.02.10.01.01 Describe the meaning of: 'ditching', 'precautionary landing', and 'emergency landing'.			
	071.02.10.01.02 Describe a ditching procedure.			
	071.02.10.01.03 Describe a precautionary landing procedure.			
	071.02.10.01.04 Describe an emergency landing procedure.			
	071.02.10.01.05 Explain the factors to be considered when deciding to conduct a precautionary/emergency landing or ditching.			
	071.02.10.02.01 List some circumstances that may require a ditching, a precautionary landing or an emergency landing.			
	071.02.10.03.01 Describe the briefing to be given to passengers before conducting a precautionary/emergency landing or ditching (including evacuation).			
	071.02.10.04.01 Describe the actions and responsibilities of crew members after landing.			
	071.02.10.05.01 Explain why the aircraft must be stopped and the engine(s) shut down before launching an emergency evacuation.			
	071.02.10.05.02 Explain the CS-25 requirements regarding evacuation procedures.			
	071.02.11.01.01 Explain why an aircraft may need to jettison fuel so as to reduce its landing mass in order to make a safe landing.			
	071.02.11.01.02 Explain that when an aircraft that operates within controlled airspace needs to jettison 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 flight level to be used, which should be not less than 1 800 m (6 000 ft); and the duration of fuel jettisoning.			
	071.02.11.01.03 Explain how flaps and slats may adversely affect fuel jettisoning.			
	071.02.11.02.01 Explain why a fuel-jettisoning system must be capable of jettisoning enough fuel within 15 minutes.			
	071.02.13.02.02 State the runway condition codes for good braking action, and when a special air report is required.			

Nap-tári hét	Előadás tárgykör	Óra-szám	Gyakorlat tárgykör	Óra-szám
	071.02.13.03.01 Define the different types of hydroplaning. 071.02.13.03.02 Compute the two dynamic hydroplaning speeds using the following formulas: spin-down speed (rotating tire) (kt) equals 9 square root (pressure in PSI) spin-up speed (non-rotating tire) (kt) equals 7.7 square root (pressure in PSI). 071.02.13.03.03 State that it is the spin-up speed rather than the spin-down speed which represents the actual tire situation for aircraft touchdown on flooded runways. 071.02.13.05.01 Interpret from a SNOWTAM the contamination and braking action on a runway, taxiways and apron. 071.02.13.05.02 Explain which hazards can be identified from the SNOWTAM/METAR and how to mitigate them.			
12. B	Az időjárástól független üzemeltetés. 071.01.02.05.01 Explain the operator's responsibility regarding aerodrome/heliport operating minima. 071.01.02.05.02 Define the following terms: 'circling', 'low-visibility procedures', 'low-visibility take-off', 'visual approach'. 071.01.02.05.03 Define the following terms: 'flight control system', 'fail-passive flight control system', 'fail-operational flight control system', 'fail-operational hybrid landing system'. 071.01.02.05.05 Explain the general operating requirements for low-visibility operations. 071.01.02.05.06 Define aerodrome/heliport considerations regarding low-visibility operations. 071.01.02.05.07 Explain the training and qualification requirements for flight crew to conduct low-visibility operations. 071.01.02.05.08 Explain the operating procedures for low-visibility operations. 071.01.02.05.09 Explain the operator's and commander's responsibilities regarding minimum equipment for low-visibility operations. 071.01.02.05.10 Explain the VFR operating minima. 071.01.02.05.11 Aerodrome operating minima: explain under which conditions the commander can commence take-off. 071.01.02.05.12 Aerodrome operating minima: explain that take-off minima are expressed as visibility or runway visual range (RVR). 071.01.02.05.13 Aerodrome operating minima: explain the take-off RVR value depending on the aerodrome facilities. 071.01.02.05.14 Aerodrome operating minima: explain the system minima for non-precision approach (NPA) (minimum descent altitude/height (MDA/H) and decision altitude/height (DA/H), not RVR). 071.01.02.05.15 Aerodrome operating minima: explain under which conditions a pilot can continue the approach below MDA/H or DA/H. 071.01.02.05.16 Aerodrome operating minima: explain the lowest minima for precision approach category I (including single-pilot operations). 071.01.02.05.17 Aerodrome operating minima: explain the lowest minima for precision approach category II operations. 071.01.02.05.18 Aerodrome operating minima: explain the lowest minima for precision approach category III operations. 071.01.02.05.19 Aerodrome operating minima: explain the lowest minima for circling and visual approach.	21-24 *16-19	Alap IFR és LVO eljárások tanulmányozása.	6

Nap- tári hét	Előadás tárgykör	Óra- szám	Gyakorlat tárgykör	Óra- szám
13. A	<p>Speciális jóváhagyások</p> <p>071.01.03.01.01 Minimum time routes: define and interpret minimum time route (route that gives the shortest flight time from departure to destination adhering to all ATC and airspace restrictions).</p> <p>071.01.03.01.02 State the circumstances in which a take-off alternate must be selected.</p> <p>071.01.03.01.03 State the maximum flight distance of a take-off alternate for: two-engined aeroplanes; ETOPS-approved aeroplanes; three- or four-engined aeroplanes.</p> <p>071.01.03.01.04 State the factors to be considered in the selection of a take-off alternate.</p> <p>071.01.03.01.05 State when a destination alternate need not be selected.</p> <p>071.01.03.01.06 State when two destination alternates must be selected.</p> <p>071.01.03.01.07 State the factors to be considered in the selection of a destination alternate aerodrome.</p> <p>071.01.03.01.08 State the factors to be considered in the selection of an en-route alternate aerodrome.</p> <p>071.01.03.02.01 According to ICAO Doc 7030, explain that special rules apply to the North Atlantic (NAT) Region, and crews need to be specifically trained before flying in this area.</p> <p>071.01.03.02.02 Describe the possible indications of navigation system degradation, including any system-generated warning.</p> <p>071.01.03.02.03 Describe by what emergency means course and inertial navigation system (INS) can be cross-checked in the case of three navigation systems and two navigation systems.</p> <p>071.01.03.02.04 Describe the general ICAO procedures applicable in NAT airspace if the aircraft is unable to continue the flight in accordance with its air traffic control (ATC) clearance.</p> <p>071.01.03.02.05 Describe the ICAO procedures applicable in NAT airspace in case of radio-communication failure.</p> <p>071.01.03.02.06 Describe the recommended initial action if an aircraft is unable to obtain a revised ATC clearance.</p> <p>071.01.03.02.07 Describe the subsequent action for aircraft able to maintain assigned flight level and for aircraft unable to maintain assigned flight level.</p> <p>071.01.03.02.08 Describe determination of tracks and courses for random routes in NAT airspace.</p> <p>071.01.03.02.09 Specify the method by which planned tracks are defined (by latitude and longitude) in the NAT airspace: when operating predominately in an east–west direction south of 70 degrees N, and when operating predominately in an east–west direction north of 70 degrees N.</p> <p>071.01.03.02.10 State the maximum flight time recommended between significant points on random routes.</p> <p>071.01.03.02.11 Specify the method by which planned tracks for random routes are defined for flights operating predominantly in a north–south direction.</p> <p>071.01.03.02.12 Describe how the desired random route must be specified in the ATC flight plan.</p> <p>071.01.03.02.13 Describe what precautions can be taken when operating in the area of compass unreliability as a contingency against INS failure.</p> <p>071.01.03.03.01 State the lateral dimensions (in general terms) and vertical limits of the NAT HLA.</p> <p>071.01.03.03.02 Define the following acronyms: LRNS, MASPS, NAT HLA, OCA, OTS, PRM, RVSM, SLOP, and WATRS.</p> <p>071.01.03.03.03 State the NAT HLA operations.</p> <p>071.01.03.03.04 Describe the routes for aircraft with only one long-range navigation system (LRNS).</p>	25-28 *20-22	ETOPS (NAT) eljárások tanulmányozása	7

Nap-tári hét	Előadás tárgykör	Óra-szám	Gyakorlat tárgykör	Óra-szám
	<p>071.01.03.03.05 Describe the routes for aircraft with short-range navigation equipment only.</p> <p>071.01.03.03.06 Explain why the horizontal (i.e. latitudinal and longitudinal) and vertical navigation performance of operators within NAT HLA is monitored on a continual basis.</p> <p>071.01.03.03.07 Describe the organised track system (OTS).</p> <p>071.01.03.03.08 State the OTS changeover periods.</p> <p>071.01.03.03.09 Describe the NAT track message.</p> <p>071.01.03.03.10 Illustrate routes between northern Europe and the Spain/Canaries/Lisbon flight information region (FIR) within NAT HLA.</p> <p>071.01.03.03.11 Describe the function of the North American Routes (NARs) and Shannon Oceanic Transition Area (SOTA) and Northern Oceanic Transition Area (NOTA).</p> <p>071.01.03.03.12 State that all flights should plan to operate on great-circle tracks joining successive significant way-points.</p> <p>071.01.03.03.13 State that during the hours of validity of the OTS, operators are encouraged to plan flights: 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, either laterally or vertically.</p> <p>071.01.03.03.14 State which flight levels are available on OTS tracks during OTS periods.</p> <p>071.01.03.03.15 State which flight levels are to be planned on random tracks or outside OTS periods.</p> <p>071.01.03.03.16 Selection of cruising altitude. Specify the appropriate cruising levels for normal long-range IFR flights and for those operating on the North Atlantic OTS.</p> <p>071.01.03.03.18 State that pilots should notify the oceanic area control centre (OAC) of the maximum acceptable flight level possible at the boundary.</p> <p>071.01.03.03.19 State that at some aerodromes which are situated close to oceanic boundaries, the oceanic clearance must be obtained before departure.</p> <p>071.01.03.03.20 State that if an aircraft encounters, whilst en-route to the NAT Oceanic Airspace, an in-flight equipment failure relevant to the airspace, then the pilot must advise ATC when requesting oceanic clearance.</p> <p>071.01.03.03.21 State that 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, unless providing position reports via automatic dependent surveillance - contract (ADS-C), the pilot must pass a revised estimate on to ATC.</p> <p>071.01.03.03.22 State that 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 Region involve aircraft which have followed their flight plan rather than the differing clearance.</p> <p>071.01.03.03.23 State that if the entry point of the oceanic route for which the flight is cleared differs from that originally requested or the oceanic flight level differs from the current flight level, the pilot is responsible for requesting and obtaining the necessary domestic re-clearance.</p> <p>071.01.03.03.24 State that there are three elements to an oceanic clearance: route, speed, and flight level, and that these elements serve to provide for the three basic elements of separation: lateral, longitudinal, and</p>			

Nap-tári hét	Előadás tárgykör	Óra-szám	Gyakorlat tárgykör	Óra-szám
	vertical.			
14. B	<p>Speciális jóváhagyások</p> <p>071.01.03.03.25 Communications and position-reporting procedures State that pilots communicate with OACCs via aeradio stations staffed by communicators who have no executive ATC authority.</p> <p>071.01.03.03.26 State that messages are relayed from the ground station to the air traffic controllers of the relevant OACC for action.</p> <p>071.01.03.03.27 State that frequencies from the lower HF bands tend to be used for communications during night-time and those from the higher bands during daytime. When initiating contact with an aeradio station, the pilot should state the HF frequency in use.</p> <p>071.01.03.03.28 State that since oceanic traffic typically communicates with ATC through aeradio facilities, a satellite communication (SATVOICE) 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> <p>071.01.03.03.29 State that an air-to-air VHF frequency has been established for worldwide use when aircraft are out of range of VHF ground stations which utilise the same or adjacent frequencies. This frequency, 123.450 MHz, is intended for pilot-to-pilot exchanges of operationally significant information.</p> <p>071.01.03.03.30 State that any pilot, who provides position reports via data link and encounters significant meteorological phenomena (such as moderate/severe turbulence or icing, volcanic ash or thunderstorms), should report this information.</p> <p>071.01.03.03.31 State that all turbine-engined aeroplanes having a maximum certified take-off mass exceeding 5 700 kg or authorised to carry more than 19 passengers are required to carry and operate airborne collision avoidance system (ACAS) II in the NAT Region.</p> <p>071.01.03.03.32 State that even with the growing use of data-link communications, a significant volume of NAT air-ground communications are conducted using voice on single sideband (SSB) HF frequencies. To support air-ground ATC communications in the North Atlantic Region, 24 HF frequencies have been allocated, in bands ranging from 2.8 to 18 MHz.</p> <p>071.01.03.03.33 Application of the Mach number technique (NAT HLA) State that 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.</p> <p>071.01.03.03.34 State that 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.</p> <p>071.01.03.03.35 NAT HLA flight operation and navigation procedures State that the pre-flight procedures for any NAT HLA flight must include a Universal Time Coordinated (UTC) time check.</p> <p>071.01.03.03.36 Describe the function and use of the master document.</p> <p>071.01.03.03.37 State the requirements for position plotting.</p> <p>071.01.03.03.38 Describe the pre-flight procedures for: the alignment of IRS; the satellite navigation availability prediction programme for flights using global navigation satellite long-range navigation system</p>	29-32 *22-24	Zárthelyi dolgozat.	8

Nap-tári hét	Előadás tárgykör	Óra-szám	Gyakorlat tárgykör	Óra-szám
	(GNSS LRNS); loading of initial waypoints; and flight plan check.			
	071.01.03.03.39 Describe the strategic lateral offset procedure (SLOP) and state that along a route or track there will be three positions that an aircraft may fly: centre line, or up to 2 NM right.			
	071.01.03.03.40 State that RNAV 10 retains the RNP 10 designation, as specified in the Performance-based Navigation Manual (ICAO Doc 9613) (ICAO Doc 7030, NAT Chapter 4).			
	071.01.03.03.41 State that both aircraft and operators must be RNP 10- or RNP 4-approved by the State of the Operator or the State of Registry, as appropriate.			
	071.01.03.03.42 State that RNP 10 is the minimum navigation specification for the application of 93 km (50 NM) lateral separation.			
	071.01.03.03.43 Reduced vertical separation minima (RVSM) flight in NAT HLA State the altimeter cross-check to be performed before entering NAT HLA.			
	071.01.03.03.44 State the altimeter cross-check to be performed when entering and flying in NAT HLA.			
	071.01.03.03.45 State that pilots not using controller–pilot data-link communications (CPDLC)/ADS-C always report to ATC immediately on leaving the current cruising level and on reaching any new cruising level.			
	071.01.03.03.46 State that flight crew should report when a 300-ft deviation or more occurs.			
	071.01.03.03.47 Navigation planning procedures List the factors to be considered by the commander before commencing the flight.			
	071.01.03.03.48 For this part, consider aircraft equipped with only two operational LRNSs and state the requirements for the following situations: one system fails before take-off; one system fails before the OCA boundary is reached; one system fails after the OCA boundary is crossed; and the remaining system fails after entering NAT HLA.			
	071.01.03.03.49 State the general procedures and also state that the general concept of these NAT in-flight contingency procedures is, whenever operationally feasible, to offset the assigned route by 5 NM and climb or descend to a level which differs from those normally used by 500 ft if below FL 410 or by 1 000 ft if above FL 410.			
	071.01.03.03.50 State all the factors which may affect the direction of turn including: direction to an alternate aerodrome; terrain clearance; levels allocated on adjacent routes or tracks and any known SLOP offsets adopted by other nearby traffic.			
	071.01.03.03.51 State that if the deviation around severe weather is to be greater than 5 NM, the assigned flight level must be changed by plus/minus 300 ft depending on the followed track and the direction of the deviation.			
	071.01.03.04.01 State that ETOPS approval is part of an AOC.			
	071.01.03.04.02 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.			
	071.01.03.04.03 State the requirements for take-off alternate.			
	071.01.03.04.04 State the planning minima for ETOPS en-route alternate.			
	071.01.03.04.05 Navigation-planning procedures. Describe the operator’s responsibilities concerning ETOPS routes.			

Nap-tári hét	Előadás tárgykör	Óra-szám	Gyakorlat tárgykör	Óra-szám
	071.01.03.04.06 Selection of a route. Describe the limitations on extended-range operations with two-engined aeroplanes with and without ETOPS approval. 071.01.03.04.07 Selection of alternate aerodrome. State the maximum flight distance of a take-off alternate for: two-engined aeroplanes; ETOPS-approved aeroplanes; three- or four-engined aeroplanes. 071.01.03.04.08 State the maximum distance from an adequate aerodrome for two-engined aeroplanes without an ETOPS approval. 071.01.03.04.09 State the requirement for alternate aerodrome accessibility check for ETOPS operations.			
15 A	Spring break		Tavaszi szünet	
16. A	Műszerek és berendezések üzemeltetése. 071.01.02.06.01 Explain which items do not require an equipment approval. 071.01.02.06.02 Explain the requirements regarding availability of spare electrical fuses. 071.01.02.06.03 Explain the requirements regarding windshield wipers. 071.01.02.06.04 List the minimum equipment required for day and night VFR flights. 071.01.02.06.05 List the minimum equipment required for IFR flights. 071.01.02.06.06 Explain the required additional equipment for single-pilot operations under IFR. 071.01.02.06.07 State the requirements for an altitude alerting system. 071.01.02.06.09 State the requirements for ground proximity warning system (GPWS)/terrain awareness and warning system (TAWS). 071.01.02.06.10 State the requirements for airborne collision avoidance system (ACAS). 071.01.02.06.11 State the conditions under which an aircraft must be fitted with a weather radar. 071.01.02.06.12 State the circumstances under which a cockpit voice recorder (CVR) is compulsory (after 1998). 071.01.02.06.13 State the rules regarding the location, construction, installation, and operation of cockpit voice recorders (CVRs) (after 1998). 071.01.02.06.14 State the circumstances under which a flight data recorder (FDR) is compulsory (after 1998). 071.01.02.06.15 State the rules regarding the location, construction, installation, and operation of flight data recorders (FDRs) (after 1998). 071.01.02.06.16 Explain the requirements about seats, seat safety belts, harnesses, and child-restraint devices. 071.01.02.06.17 Explain the requirements about 'Fasten seat belt' and 'No smoking' signs. 071.01.02.06.18 Explain the requirements regarding internal doors and curtains. 071.01.02.06.19 Explain the requirements regarding first-aid kits. 071.01.02.06.20 Explain the requirements regarding emergency medical kits and first-aid oxygen. 071.01.02.06.21 Detail the rules regarding crew protective breathing equipment. 071.01.02.06.22 Describe the type and location of handheld fire extinguishers. 071.01.02.06.23 Describe the location of crash axes and crowbars. 071.01.02.06.24 Specify the colours and markings used to indicate break-in points. 071.01.02.06.25 Explain the requirements for means of emergency evacuation. 071.01.02.06.26 Explain the requirements for megaphones.	33-36 *25-27	Műszerek és berendezések üzemeltetési eljárásainak tanulmányozása	9

Nap-tári hét	Előadás tárgykör	Óra-szám	Gyakorlat tárgykör	Óra-szám
	071.01.02.06.27 Explain the requirements for emergency lighting and marking. 071.01.02.06.28 Explain the requirements for an emergency locator transmitter (ELT). 071.01.02.06.29 Explain the requirements for life jackets, life rafts, survival kits, and ELTs. 071.01.02.06.31 Explain the requirements for survival equipment.			
17. B	Kommunikációs és navigációs berendezések üzemeltetése. 071.01.02.07.01 Explain the general requirements for communication and navigation equipment. 071.01.02.07.02 Explain why the radio-communication equipment must be able to send and receive on 121.5 MHz. 071.01.02.07.03 Explain the requirements regarding the provision of an audio selector panel. 071.01.02.07.04 List the requirements for radio equipment when flying under VFR by reference to visual landmarks. 071.01.02.07.05 List the requirements for communication and navigation equipment when operating under IFR or under VFR over routes not navigated by reference to visual landmarks. 071.01.02.07.06 Explain what equipment is required to operate in airspace with reduced vertical separation minima (RVSM). 071.01.02.07.07 Explain the conditions under which a crew member interphone system and public address system are mandatory. 071.01.02.07.10 Explain the requirements regarding the provision of a transponder. 071.01.02.07.11 Explain the requirements regarding the management of aeronautical databases.	37-40 *28-30	Kommunikációs és navigációs berendezések üzemeltetési eljárásainak tanulmányozása.	10
18. A	Légijárművek karbantartása. A légijárművek típus és légialkalmassága. A hajózó személyzet szerepe a légialkalmasság fenntartásban és a karbantartásban. A légialkalmassági nyilvántartás hajózó személyzet által is használandó része és annak funkciói.	41-44 *31-33	Légialkalmassági nyilvántartás elemeinek bemutatása.	11
19. B	A hajózószemélyzet képzése és minősítése. 071.01.02.09.01 Explain the requirement regarding flight crew composition and in-flight relief. 071.01.02.09.02 Explain the requirement for conversion training and checking. 071.01.02.09.03 Explain the requirement for differences training and familiarisation training. 071.01.02.09.04 Explain the conditions for upgrade from co-pilot to commander. 071.01.02.09.05 Explain the minimum qualification requirements to operate as a commander. 071.01.02.09.06 Explain the requirement for recurrent training and checking. 071.01.02.09.07 Explain the requirement for a pilot to operate on either pilot's seat. 071.01.02.09.08 Explain the minimum recent experience requirements for the commander and the co-pilot. 071.01.02.09.09 Specify the route and aerodrome/heliport knowledge required for a PIC/commander. 071.01.02.09.10 Explain the requirement to operate on more than one aircraft type or variant. 071.01.02.09.11 Explain that when a flight crew member operates both helicopters and aeroplanes, the operations are limited to one of each type. 071.01.02.09.12 Explain the requirement(s) for training records. 071.01.02.09.13 Explain the crew members' responsibilities in the execution of their duties, and define the commander's authority.	45-48 *34-36	Kiképzések, felújító és átképzések tematikáinak tanulmányozása.	12

Nap- tári hét	Előadás tárgykör	Óra- szám	Gyakorlat tárgykör	Óra- szám
	<p>071.01.02.09.14 Explain the operator's and commander's responsibilities regarding persons on board, admission to the flight crew compartment and carriage of unauthorised persons or cargo.</p> <p>071.01.02.09.15 Explain the requirements for the initial operator's crew resource management (CRM) training.</p> <p>071.01.02.10.01 Explain who is regarded as cabin crew member.</p> <p>071.01.02.10.02 Detail the requirements regarding the number and composition of cabin crew.</p> <p>071.01.02.10.03 Explain the conditions and the additional conditions for assignment to duties.</p> <p>071.01.02.10.04 Explain the requirements regarding senior cabin crew members.</p> <p>071.01.02.10.05 Explain the conditions for operating on more than one aircraft type or variant.</p> <p>071.01.02.10.06 Explain what is the operator's responsibility regarding the distinction between cabin crew members and additional crew members.</p> <p>071.01.02.12.01 Explain the definitions used for the regulation of flight time limitations.</p> <p>071.01.02.12.02 Explain the flight and duty time limitations.</p> <p>071.01.02.12.03 Explain the requirements regarding the maximum daily flight duty period.</p> <p>071.01.02.12.04 Explain the requirements regarding rest periods.</p> <p>071.01.02.12.05 Explain the possible extension of flight duty period due to in-flight rest.</p> <p>071.01.02.12.06 Explain that it is the captain's discretion to extend flight duty in case of unforeseen circumstances in actual flight operations.</p> <p>071.01.02.12.07 Explain the requirement regarding standby.</p> <p>071.04.01.01.01 Explain the requirements related to flight crew recurrent training and checking and operator proficiency check.</p> <p>071.04.01.02.01 Explain the task specialist's responsibilities.</p>			
20. A	<p>Okmányok és dokumentációk az üzemeltetésben.</p> <p>071.01.02.02.13 List the documents to be carried on each flight.</p> <p>071.01.02.02.14 Explain the operator's responsibility regarding manuals to be carried on board an aircraft.</p> <p>071.01.02.02.15 List the additional information and forms to be carried on board an aircraft.</p> <p>071.01.02.02.16 List the copies of items of information to be retained on the ground by the operator.</p> <p>071.01.02.02.17 Explain what responsibilities the operator and the commander have regarding the production of and access to records and documents.</p> <p>071.02.01.01.01 Explain the general rules for the operations manual.</p> <p>071.02.01.01.02 Explain the structure and subject headings of the operations manual.</p> <p>071.02.01.01.03 Explain the requirements for a journey log or equivalent.</p> <p>071.02.01.01.04 Describe the requirements regarding the operational flight plan.</p> <p>071.02.01.01.05 Explain the requirements for document-storage periods.</p> <p>071.02.01.01.06 Explain that all non-type-related operational policies, instructions and procedures required for a safe operation are included in Part A of the operations manual.</p> <p>071.02.01.01.07 State that the following items are included into Part A: 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 list (MEL) and configuration deviation list(s) (CDL); se-</p>	49-52 *37-39	Okmányminták és dokumentációk bemutatása használata.	13

Nap-tári hét	Előadás tárgykör	Óra-szám	Gyakorlat tárgykör	Óra-szám
	<p>curity; handling of accidents and occurrences.</p> <p>071.02.01.01.08 State that the following items are included into Part A: altitude alerting system procedures; ground proximity warning system procedures; policy and procedures for the use of traffic alert and collision avoidance system (TCAS)/airborne collision avoidance system (ACAS).</p> <p>071.02.01.02.01 State that all type-related instructions and procedures required for a safe operation are included in Part B of the operations manual. They take account of any differences between types, variants or individual aircraft used by an operator.</p> <p>071.02.01.02.02 State that the following items are included into Part B: abnormal and emergency procedures; configuration deviation list (CDL); minimum equipment list (MEL); emergency evacuation procedures.</p> <p>071.02.01.03.01 Describe the following terms: ‘commencement of flight’, ‘inoperative’, ‘MEL’, ‘MMEL’, ‘rectification interval’.</p> <p>071.02.01.03.02 Explain the relation between MMEL and MEL.</p> <p>071.02.01.03.03 Define the ‘extent of the MEL’.</p> <p>071.02.01.03.04 Explain the responsibilities of the operator and the competent authority with regard to MEL and MMEL.</p> <p>071.02.01.03.05 Explain the responsibilities of the flight crew members with regard to MEL.</p> <p>071.02.01.03.06 Explain the responsibilities of the commander with regard to MEL.</p>			
21. B	<p>Veszélyes áruk szállítása, repülésvédelem.</p> <p>071.02.12.01.01 Define the following terms: ‘dangerous goods’, ‘dangerous goods accident’, ‘dangerous goods incident’, ‘exemption’, ‘incompatible’, ‘packaging’, ‘UN number’.</p> <p>071.02.12.01.02 Explain that detailed provisions for the transport of dangerous goods by air are contained in the Technical Instructions for the Safe Transport of Dangerous Goods by Air.</p> <p>071.02.12.01.03 State that in the event of an in-flight emergency, the pilot-in-command must inform the ATC of the transport of dangerous goods by air.</p> <p>071.02.12.02.01 Explain the principle of dangerous goods compatibility and segregation.</p> <p>071.02.12.02.02 Explain the special requirements for the loading of radioactive materials.</p> <p>071.02.12.02.03 Explain the use of the dangerous goods list.</p> <p>071.02.12.02.04 Identify the labels.</p> <p>071.02.12.03.01 Explain the terminology relevant to dangerous goods.</p> <p>071.02.12.03.02 Explain the scope of that Regulation.</p> <p>071.02.12.03.03 Explain why the transport of dangerous goods by air is subject to operator approval.</p> <p>071.02.12.03.04 Explain the limitations on the transport of dangerous goods by air.</p> <p>071.02.12.03.05 Explain the requirements for the acceptance of dangerous goods.</p> <p>071.02.12.03.06 Explain the requirements regarding inspection for damage, leakage or contamination.</p> <p>071.02.12.03.07 Explain the requirement for the provision of information to flight crew.</p> <p>071.02.12.03.08 Explain the requirements for dangerous goods incident and accident reports.</p> <p>071.02.12.03.09 State that some articles and substances, which would otherwise be classed as dangerous goods, can be exempted if they are part of the aircraft equipment, or required for use during aeromedical flights.</p>	53-56 *40-42	Zárthelyi dolgozat.	14

Nap- tári hét	Előadás tárgykör	Óra- szám	Gyakorlat tárgykör	Óra- szám
	<p>071.02.12.03.10 Explain why some articles and substances may be forbidden for transport by air.</p> <p>071.02.12.03.11 Explain why packing must comply with the specifications of the Technical Instructions.</p> <p>071.02.12.03.12 Explain the need for an inspection prior to loading dangerous goods on an aircraft.</p> <p>071.02.12.03.13 Explain why some dangerous goods are designated for carriage only on cargo aircraft.</p> <p>071.02.12.03.14 Explain how misdeclared or undeclared dangerous goods found in baggage are to be reported.</p> <p>071.02.09.01.01 Define the following terms: 'aircraft security check', 'screening', 'security', 'security-restricted area', 'unidentified baggage'.</p> <p>071.02.09.01.02 State the objectives of security.</p> <p>071.02.09.02.01 Describe the commander's responsibilities concerning notifying the appropriate ATS unit.</p> <p>071.02.09.02.02 Describe the commander's responsibilities concerning operation of SSR.</p> <p>071.02.09.02.03 Describe the commander's responsibilities concerning departing from assigned track or cruising level.</p> <p>071.02.09.02.04 Describe the commander's responsibilities concerning the action required or being requested by an ATS unit to confirm SSR code and ATS interpretation response.</p> <p>071.02.09.03.01 Describe the relationship between Regulation (EC) No 300/2008 and ICAO Annex 17.</p> <p>071.02.09.03.02 Explain the requirements regarding training programmes.</p> <p>071.02.09.03.03 State the requirements regarding reporting acts of unlawful interference.</p> <p>071.02.09.03.04 State the requirements regarding aircraft search procedures.</p>			