



National Flight Centre
Distance Learning Theoretical Knowledge
Course
for
KSA100 EASA ATPL(A)

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*A Course Study Plan providing a detailed study programme for Modules A,B,C & D is supplied as a separate document.

Introduction

Welcome to the National Flight Centre's KSA100 ATPL(A) distance learning course.

So, what is KSA100? The European Plan for Aviation Safety has brought about the introduction of updated Learning Objectives (LOs) for the ATPL(A) theoretical knowledge syllabi and ground school examinations and introduces the threat and error management (TEM) concept and its application. The updated LOs correspond to today's operational environment and ensure that candidates for the award of an Airline Transport Pilot's Licence (ATPL) are equipped with the knowledge and understanding relevant to the demands of the modern flight deck and current industry requirements.

From June 2020 candidates submitting applications to the Irish Aviation Authority to sit examinations for the award of an EASA ATPL will have to undertake examinations in accordance with the LOs as defined in EDs 2018/001/R, 2018/011/R and 2019/017/R.

The National Flight Centre in partnership with Padpilot provides students with the study material and structure to prepare for the EASA KSA100 ATPL(A) theoretical knowledge examinations. The course content is via a set of 16 digital manuals and an online learning management system (PadPilot ACE LMS) to provide 46 progress tests as a continuous assessment of the individual student's knowledge of the subject material.

To access the Padpilot course manuals, the student must use an Apple iPad or Apple Mac.

The pages that follow set out the National Flight Centre's KSA100 ATPL(A) distance learning course and will explain how the course is delivered and assessed.

The Aim of the Course

The aim of the ATPL (A) modular theoretical knowledge distance learning course is to build student knowledge and understanding of the ATPL subjects while covering the knowledge required for the ATPL(A) in accordance with AMC1 FCL.310; FCL.515 (b); FCL.615 (b).

Duration of the Course

The NFC ATPL (A) modular theoretical knowledge distance learning course is based on 4 x modules of distance learning and supporting classroom instruction with a suggested completion period of 12 months. The complete Padpilot distance learning course requires approximately 660 hours of individual study to complete (subject to credits) plus a further 36 hours for Maths and Physics. The student must also complete the classroom tuition and pass the ATO Examinations to be eligible for the IAA Examinations. Each classroom activity comprises Theoretical Knowledge instruction, Area 100 assessment and/or invigilated Approved Training Organisation exams. This classroom instruction take place online in the 'virtual classroom' or in the traditional classroom setting.

This completion period of 12 months can be shortened for students who can dedicate sufficient time to complete the self-study course work in a reduced time.

The examination window for the completion of all 13 EASA professional pilot exams is 18 months. The start date for the commencement of this 18-month window is the date of the first exam taken.

Training Syllabus

The theoretical knowledge training syllabus is determined by EASA AMC1 FCL.310; FCL.515 (b); FCL.615 (b)

Training Programme

All theoretical knowledge instruction is conducted in the English language and is divided into subjects related to the current examination system. The course comprises a distance learning and classroom phase for each module and the breakdown is shown on page 12.

The educational aim of the ATPL(A) course is to:

- Equip the student with all the knowledge, skills and attitudes required for a career as a professional pilot.
- Develop in the student a deep understanding of the principles of threat and error management (TEM).
- Develop in the student and deep understanding of the connection between various elements of theoretical knowledge and the practical aviation situations which s/he may experience.
- Achieve the required standard to be approved to sit the EASA theoretical knowledge exams for the award of an ATPL(A).

Pre-entry Requirements

An applicant for the EASA ATPL (A) modular theoretical knowledge distance learning course must:

- Have attained the age of 17 years
- Hold a valid PPL (A) issued in accordance with ICAO Annex 1
- Be able to read, write and orally communicate in the English language to a minimum of ICAO Level 4
- Have sufficient knowledge of Mathematics and Physics (science) to facilitate an understanding of the theoretical knowledge instruction content of the course.

This entry standard is deemed met on successful completion of the Padpilot Mathematics and Physics course through the PadPilot Learning management System.

- Complete the distance learning application form at <https://nfc.ie/atpl-distance-learning-application/>

Prior to beginning a course each student must provide the following:

- An acceptable form of photographic identity. A passport is preferable. An Irish Public Services Card (PSC), Irish Driving licence, Current ID of a serving member of the Irish government public service or statutory body or Current ID of a serving member of An Garda Síochána (Irish police) or Irish military is also acceptable.
- A copy of their current pilots licence (ICAO PPL as a minimum), class 1 medical and most recent flight experience (where applicable, last three pages of logbook)
- Pay the relevant course fee, after course acceptance.

Note: A student who is weak in Maths and Physics can download the Maths and Physics manual from Padpilot via iBooks at <https://padpilot.com/>. This is a free download intended to help improve the maths skills of students to help them with some of the more technical subjects such as Principles of Flight and General Navigation.

Credits from Previous Experience

EASA Part-FCL, Appendix 3, Part B allows the following reductions in theoretical knowledge training hours: CPL (A) / IR holder a reduction of 400 hours (minimum 250 Hours)

- CPL (A) holder a reduction of 250 hours (minimum 400 hours)
- IR holder a reduction of 150 hours (minimum 500 hours)

Any available credits for previous qualifications will be at the discretion of the CTKI. Whilst the duration of the course is shortened, students must achieve a satisfactory standard in the progress tests and ATO exams to be eligible to enter the exam system.

The following credits are given for EASA Part-FCL ATPL (A) theoretical knowledge exams:

- Holders of a EASA CPL (A) or (H) will be credited with Communications
- Holders of a EASA IR (A) or (H) will be credited with Communications

Training Materials

National Flight Centre's KSA100 ATPL(A) distance learning course uses the new Padpilot set of 16 x 2nd Edition digital manuals for the EASA 2020 syllabus. These digital manuals must be purchased separately by the student at <https://padpilot.com/>. The Second Edition digital manuals required for this course are as follows:

	Title	Edition	ISBN
1	Air Law	Second Edition	978-1-909600-74-4
2	AGK: Electrics	Second Edition	978-1-909600-61-4
3	AGK: Engines	Second Edition	978-1-909600-59-1
4	AGK: Airframes & Systems	Second Edition	978-1-909600607
5	Basic Instrumentation	Second Edition	978-1-909600-70-6
6	Advanced Instrumentation	Second Edition	978-1-909600-68-3
7	Mass and Balance	Second Edition	978-1-909600-69-0
8	Flight Planning	Second Edition	978-1-909600-66-9
9	Human Performance	Second Edition	978-1-909600-64-5
10	Meteorology	Second Edition	978-1-909600-68-3
11	General Navigation	Second Edition	978-1-909600-62-1
12	Radio Navigation	Second Edition	978-1-909600-65-2
13	Operational Procedures	Second Edition	978-1-909600-73-7
14	Principles of Flight	Second Edition	978-1-909600-67-6
15	Communications	Second Edition	978-1-909600-71-3
16	Aeroplane Performance	Second Edition	978-1-909600-72-0

Students can also download a free copy of Maths and Physics for Pilots from Padpilot.

Each student will need to obtain an Apple ID for their respective device and use this to download the Padpilot ATPL manuals from Apple iBooks. Links to the iBook store and the manuals can be found on the Padpilot website at <http://padpilot.com>.

Students can purchase the manuals on a module-by-module basis or all at once. Each student must download the required digital manuals from iBooks in sufficient time for the commencement of each module.

Students will also be required to purchase the Jeppesen General Student Pilot Route Manual containing the supporting material for their navigation studies and a CRP-5 computer. The cost of these 2 items is not included in the course fee.

Additional Training Materials

Students will be required to access a number of Civil Aviation Authority publications to support their studies and for examinations. These materials can be found online and can be downloaded free of charge. While available and accessible in an electric format, students will be required to print a hard copy of these materials for use in examinations.

CAP 696	Mass and Balance Manual (Aeroplanes)	https://publicapps.caa.co.uk/docs/33/CAP697.pdf
CAP 697	Flight Planning Manual	https://publicapps.caa.co.uk/docs/33/CAP697.pdf

Continuous Assessment

Continuous assessment is a central tenant of the Padpilot concept with chapter quizzes and progress check assessment included within the students' iBooks. An online learning management system (the *PadpilotACE* LMS) uses non-proprietary modules to provide 46 progress tests to deliver this continuous assessment. These assessments are drawn from Padpilot's own custom database of 5300 questions tailored to the EASA 2020 syllabus. Progress is monitored and reported via Padpilot's ACE assessment tool to the NFC Training Department.

The standard Students are required to achieve and maintain throughout is 85% on all Padpilot progress checks. This formative and summative assessment will give a student a realistic indication of their understanding and knowledge retention of the material covered in their assigned reading. Each progress test must be completed by the student to required standard to unlock subsequent tests.

NFC will register students on enrolment with Padpilot who will provide the student with access to the online learning management system.

Area 100 Assessment

The KSA100 ATPL(A) Syllabus see the introduction of Area 100 'Knowledge, Skills and Attitudes' (KSA) Learning Objectives to enhance the candidate's KSA as contained in the core competencies. This requires NFC as an approved training organisation (ATO) to assess candidates' KSA in the core competencies. Under the examination procedures that apply with the provision of exams under the revised syllabus, **the candidate must complete Area 100 KSA assessment before being recommended by an ATO to sit the final examination paper at the first attempt.**

The National Flight Centre (NFC) will conduct Formative and Summative assessments as part of the KSA100 ATPL(A) Distance Learning Course. The focus is on the students' ability to apply their knowledge and understanding across subjects and to demonstrate technical and non-technical skills. These skills will not be assessed by the Authority, but by NFC to ensure that candidates have demonstrated an adequate level of competence before approval is granted to sit their final theoretical knowledge examination. Area 100 Assessment will form part of each consolidation period at the end of each of the four Modules and will form part of the classroom tuition.

The Area 100 requirement assess the student in the ICAO Core competencies listed as:

1. Applications of Procedures.
2. Communication
3. Aircraft flight Path Management, (automation).
4. Aircraft Flight Path Management, (manual control).
5. Leadership and Teamwork.
6. Problem Solving and Decision Making.
7. Situational Awareness.
8. Workload Management.

ATO Exams

At the end of each module, to obtain ATO theoretical knowledge course certification, students are required to sit ATO examinations with NFC to assess their knowledge in each subject prior to being approved by the CTKI or Authorised Signatory to sit IAA EASA professional pilot exams. The pass mark set by the National Flight Centre for these exams is 85%. A student who fails to achieve the pass standard in the ATO exams will not be signed off for the EASA theoretical examinations in the relevant subject(s). No exceptions will be made to this requirement. The ATO Examinations can take place online or onsite at NFC.

Course Content

Summary Totals for Self-Study for Distance Learning Course				
Subject Area	Area Name	Subject	Padpilot Subject Hours	ATPL (DL) Self-Study Subject Area Hours
010	Air Law	010 Air Law	57:13	58:00
02-	Aircraft General Knowledge	021 01 Airframe and Systems	25:00	138:00
		021 02 Electrics	15:13	
		021 03 Engines	29:40	
		022 Instrumentation	66:16	
03-	Flight Performance and Planning	031 Mass and Balance	25:21	106:00
		032 Aeroplane Performance	42:37	
		033 Flight Planning	36:51	
040	Human Performance and Limitations	040 Human Performance and Limitations	40:08	42:00
050	Meteorology	050 Meteorology	45:37	46:00
06-	Navigation	061 General Navigation	98:31	141:00
		062 Radio Navigation	41:18	
070	Operational Procedures	070 Operational Procedures	44:09	45:00
08-	Principles of Flight	081 Principles of Flight (A)	68:54	69:00
090	Communications	090 Communications	14:55	15:00
			651:43	660:00

Module Breakdown: ATPL Distance Learning Course

The National Flight Centres ATPL distance learning course is broken into four modules, each comprising of 3 months with a combined total of 740 hours of theoretical knowledge learning, which includes 660 hours of self-study and classroom time. The modules are laid out below:

Module A (3 Months)	Module B (3 Months)	Module C (3 Months)	Module D (3 Months)
Aircraft General Knowledge Principles of Flight Meteorology	Flight Planning Aircraft Performance Mass & Balance	Radio Navigation Instrumentation GNAV	Communications Air Law Operational Procedures Human Performance & Limitations

Each module consists of a distance learning phase and each student will be expected to study each subject in their module extensively. Month 3 of each module is a consolidation phase in which supporting revision classes and ATO Exams are scheduled. These activities can be held online in the 'virtual classroom' and/or in the traditional classroom at the National Flight Centre.

As per EASA requirements, at least 10% of the mandatory modular hours total course time requirement will be allocated to this classroom time unless otherwise credited. **We have allocated for a total of 80 hours of classroom tuition, which includes ATO Exams.**

All weekly, progress and final tests within iMRS for that module **must** be completed prior to consolidation classes. The required standard is 85% within 3 attempts.

Please Note: It is recommended that students attempt the modules in the sequence prescribed as per their Class. The sequence of modules will be determined by the student's start date on the course and tuition will be scheduled accordingly.

The minimum mandatory study time on an ATPL distance learning course is 650 hours, of which 10% must be classroom tuition. The National Flight Centre recommends however that students follow the PadPilot Subject Hours breakdown to meet the minimums in each subject and acquire the knowledge to succeed in the EASA examinations:

<u>Module A:</u>	<u>Distance Learning</u>	<u>Classroom/ATO Exams</u>	<u>Total</u>
Principles of Flight	69	6 + 1:30	76:30
AGK	71	6 + 2	79
Meteorology	46	6 + 2	54
	182	23:30	209:30

<u>Module B:</u>	<u>Distance Learning</u>	<u>Classroom/ATO Exams</u>	<u>Total</u>
Performance	43	4 + 1:15	48:15
Mass & Balance	26	2 + 1:15	29:15
Flight Planning	37	6 + 2	45
	106	16:30	122:30

<u>Module C:</u>	<u>Distance Learning</u>	<u>Classroom/ATO Exams</u>	<u>Total</u>
Radio Navigation	42	6 + 1:30	49:30
Instrumentation	67	6 + 1:30	74:30
General Navigation	99	6 + 2:15	107:15
	208	23:15	231:15

<u>Module D:</u>	<u>Distance Learning</u>	<u>Classroom/ATO Exams</u>	<u>Total</u>
Air Law	58	3 + 1	62
Operations	45	3 + 1:15	49:15
Communications	15	2 + 1	18
Human Perf & Limit.	42	4 + 1:30	47:30
	160	16:45	176:45

Totals	660	80	740
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Course Total	<u>740*</u>
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A Course Study Plan is available separately giving a detailed breakdown of each subject and the recommended time to be spent on each chapter by students as they progress through each module.

(*Note: 740 hours is an approximate total of the Padpilot figures for self-study rounded up with the addition of consolidation tuition and ATO Examinations)

EASA ATPL(A) Exams

At the end of each module, subject to successful completion of ATO examinations with NFC, students can apply to sit EASA ATPL(A) Examinations. Examinations can be held at the Irish Aviation Authority at their Examination Centre in Dublin or the NFC Examination Centre at Weston. Exam Applications are processed and approved by the CTKI or Authorised Signatory and forwarded to the IAA. Examination fees are paid directly to the IAA by the student. The pass mark in an IAA EASA ATPL(A) Examination is 75%.

The examination window for the completion of all 13 EASA professional pilot exams is 18 months. The start date for the commencement of this 18-month window is the date of the first exam taken. All 13 Examinations must be completed within 6 Sittings with a student allowed to attempt a subject no more than 4 times. Failure to complete a subject within 4 attempts or to complete all 13 Examinations within 6 Sittings will see results forfeit and a student required to recommence the Examination process.

For those students who wish to complete their EASA ATPL(A) Examinations at an Exam Centre in another EASA state. NFC can provide certification of completion of the required training upon successful completion of ATO Examinations to support such applications.

Exam Serial	Exam Subject	Exam Time	Number of Questions
010	Air Law	01:00 Hour	44 Questions
021	AGK	02:00 Hours	80 Questions
022	Instrumentation	01:30 Hours	60 Questions
031	Mass & Balance	01:15 Hours	25 Questions
032	Performance (A)	02:00 Hours	45 Questions
033	Flight Planning & Monitoring	02:00 Hours	42 Questions
040	Human Performance & Limitations	01:30 Hours	48 Questions
050	Meteorology	02:00 Hours	84 Questions
061	General Navigation	02:15 Hours	55 Questions
062	Radio Navigation	01:30 Hours	66 Questions
070	Operational Procedures	01:15 Hours	42 Questions
081	Principles of Flight	01:30 Hours	46 Questions
090	Communications	01:00 Hour	34 Questions

(Source: IAA PLAM 019 and EASA ED 2018/011/R & Annex II to ED 2019/017/R)"

Table of Costs

NFC ATPL(A) KSA100 Modular Course		€2,600
	<i>This includes:</i>	
Consolidation Tuition	Consolidation exam preparations	€1,630
FlightLogger	12 month subscription to FlightLogger	€190
NFC ATO Exams	Examination fee €60 per subject. 13 Subjects	€780
Additional Costs (not included in the Course Fee)		
PadPilot Textbooks	Second Edition at €34:99 each	€524:85
Jeppesen Student Manual		€80
CRP-5		€147.60
IAA ATPL Examinations	Examination Fee €100 per Subject paid directly to the IAA	€1,300*
Total		€4,652.45

*Assuming a first-time pass in all subjects and not including the cost of any Repeat Examinations.

Conclusion

Thank you for choosing National Flight Centre's ATPL(A) distance learning course to prepare you for your EASA ATPL(A) Examinations. The Training Team at NFC wish you all the best with your studies. If you have any query relating to the course please contact the CTKI at fto@nfc.ie.