

Curriculum for Module 2 for AIS Training: Basis AIS

Introduction to AIS (Principles of AIS)

1. THE AERONAUTICAL INFORMATION SERVICES

The general objectives are to enable students to:
 Appreciate how the aeronautical information services function;
 Explain how information is collected and distributed

	Topic / Sub-topic	L	Content	Ref. Material
	1.1 Principles of AIS			
1.1.1	Recognise the need for AIS.	1		ICAO Annex; ICAO Doc 8126
1.1.2	Recognise the need for aeronautical information in ATM.	1		ICAO Annex 11
1.1.3	Identify the need for global uniformity.	1		ICAO Annex 15; ICAO Doc 8126
1.1.4	Identify the volume and scope of information handled by AIS.	1		
1.1.5	Differentiate between permanent and temporary information as well as information of an explanatory, advisory or administrative nature.	2	NOTAM and SUP versus AIP, AIP Amendment and AIC.	
	1.2 Organisation of AIS			
1.2.1	Describe the status of AIS within the aviation administration.	2		ICAO Doc 8126
1.2.2	Describe the organisation of the Aeronautical Information Service.	2		ICAO Doc 8126
1.2.3	Explain the liaison with other related services.	2		ICAO Doc 8126
1.2.4	Illustrate the information flow within AIS.	2		ICAO Doc 8126
	1.3 Documentation			
1.3.1	Explain the need for documentation.	2		ICAO Annex 15; National documentation
1.3.2	List the sources of documentation available.	1	ICAO publications, national regulations.	
1.3.3	List the documentation used in AIS.	1	National or local documentation, AIP and SOP.	ICAO Doc 8126
1.3.4	Describe the content of the most frequently used documents in	2	ICAO SARPs (Annexes), Docs (Procedures for Air	ICAO Doc 8126

	AIS.		Navigation Services), Manuals, Air Navigation Plan Publications, ICAO Doc 8126 other - IATA, ITU, WMO, local or national documentation.	
1.3.5	List methods to store, locate and retrieve documentation.	1	Electronic form (aeronautical databases), paper copy (manual library).	ICAO Doc 8126
1.4 Responsibilities and functions of AIS				
1.4.1	Specify the responsibilities of a contracting state.	1	Provision of AIS.	ICAO Annex 15
1.4.2	Describe the functions of AIS.	2		ICAO Annex 15
1.4.3	Appreciate the need for the distribution of appropriate information.	2		ICAO Annex 15; ICAO Doc 8126;
1.4.4	Appreciate the need for the authenticity of information to be distributed.	2	Quality Management Systems.	ICAO Annex 15; ICAO Doc 8126
1.4.5	State the originators of raw data.	1	Local originators.	ICAO Doc 8126
1.4.6	List the various types of raw data.	1		ICAO Doc 8126
1.4.7	Describe the exchange of aeronautical information with other services or States.	2		ICAO Annex 15
1.4.8	Describe the means by which aeronautical information is distributed.	2	NOTAM, AIP, AIC, AIRAC, SUP.	
1.4.9	Recognise the information distributed through the AFS.	1	ATS messages, NOTAM, MET, AO, service messages, etc.	
1.5 Integrated Aeronautical Information Package				
1.5.1	Explain the need for the Integrated Aeronautical Package.	2	Collect, collate, edit, format, publish and distribute aeronautical information.	ICAO Annex 15
1.5.2	List the principle users of the Integrated Aeronautical Package.	1	Flight operations, ATS units, third party suppliers.	
1.5.3	List the contents of the Integrated Aeronautical Package.	1	AIP, AIP AMDT, AIP SUP, NOTAM, PIB, AIC and checklists, list of valid NOTAM.	ICAO Annex 15; ICAO Doc 8126
1.5.4	State the authority responsible for the publication and distribution of the Integrated Aeronautical Package.	1	National AIS/ANSP/NSA or delegated authority.	ICAO Annex 15; ICAO Doc 8126
1.5.5	Describe the methods of distribution of the Integrated	2	Distribution list, mailing, fax, AFTN, email, other	

	Aeronautical Package.		electronic means.	
1.5.6	Explain the purpose of the AIP.	2	Essential information of a lasting character, permanent information and temporary changes of a long duration.	ICAO Annex 15; ICAO Doc 8126
1.5.7	Explain the structure of the AIP.	2	General (GEN), En route (ENR) and Aerodromes (AD).	ICAO Annex 15; ICAO Doc 8126
1.5.8	List the basic contents of Part 1 General (GEN).	1	National regulations and requirements, tables and codes, services, charges for ADs/Heliports and air navigation services.	ICAO Annex 15; ICAO Doc 8126
1.5.9	List the basic contents of Part 2 En route (ENR).	1	General rules and procedures, airspace classification, ATS routes, radio navigation aids and systems, navigation warnings, en route charts.	ICAO Annex 15; ICAO Doc 8126
1.5.10	List the basic contents of Part 3 Aerodromes (AD).	1	Aerodromes, heliports, charts.	ICAO Annex 15; ICAO Doc 8126
1.5.11	Explain how an AIP is updated.	2	AIP amendments, AIRAC, AIP supplements, NOTAM.	ICAO Annex 15
1.5.12	Explain the purpose of the AIP Amendment.	2	Permanent changes.	ICAO Annex 15; ICAO Doc 8126
1.5.13	Describe how AIP Amendments are produced.	2	Specifications, format, color coding.	ICAO Annex 15
1.5.14	Explain the purpose of the AIP Supplement.	2	Temporary changes of long duration, information of short duration with extensive text/graphics.	ICAO Annex 15; ICAO Doc 8126
1.5.15	Describe how AIP Supplements are produced.	2	Specifications, format, colour coding.	ICAO Annex 15; ICAO Doc 8126
1.5.16	Explain the purpose of NOTAM.	2	Information of a temporary nature and of short duration or when operationally significant permanent changes, or temporary changes of long duration.	ICAO Annex 15; ICAO Doc 8126
1.5.17	List the information contained in a NOTAM.	1		ICAO Annex 15; ICAO Doc 8126
1.5.18	Describe the NOTAM format.	2		ICAO Annex 15; ICAO Doc 8126
1.5.19	List special series NOTAM.	1	SNOWTAM, ASHTAM, BIRDTAM.	ICAO Annex 15; ICAO Doc 8126
1.5.20	Explain the purpose of the Preflight Information Bulletin (PIB).	2	Plain language bulletins, current information on the status of facilities.	ICAO Annex 15; ICAO Doc 8126

1.5.21	State sources of information in a PIB.	1	NOTAM, SNOWTAM and Met.	ICAO Annex 15; ICAO Doc 8126
1.5.22	Recognise the scope of a PIB.	1	Area to be covered.	ICAO Doc 8126
1.5.23	Describe the contents of a PIB.	2	Navigation warnings, general information, date and time of issue.	ICAO Doc 8126
1.5.24	List the bulletin types.	1	Area, route, aerodrome, urgent operational significance.	ICAO Doc 8126
1.5.25	Identify the structure of the PIB output.	1	Heading, en route and aerodrome information, navigation warnings.	ICAO Doc 8126
1.5.26	Explain the purpose of the Aeronautical Information Circular (AIC).	2	Administrative information, advanced notice of major changes.	ICAO Annex 15; ICAO Doc 8126
1.5.27	Explain the structure of the AIC.	2		ICAO Annex 15 ; ICAO Doc 8126
1.5.28	List information appropriate to an AIC.	1		ICAO Annex 15 ; ICAO Doc 8126
1.5.29	Explain the purpose of Checklists.	2		ICAO Doc 8126
1.5.30	Explain the purpose of lists of valid NOTAM.	2		ICAO Doc 8126
1.6 Aeronautical charts				
1.6.1	Explain the need for aeronautical charts.	2		ICAO Annex 15; ICAO Doc 8126 ; ICAO Doc 8697
1.6.2	List the types of aeronautical charts.	1		ICAO Annex 15; ICAO Annex 4; ICAO Doc 8697
1.6.3	State the information contained in aeronautical charts.	1		ICAO Annex 4; ICAO Doc 8697
1.6.4	Identify symbols and information found on maps and charts.	1		ICAO Annex 4
1.6.5	Describe the operational function of aeronautical charts.	2		ICAO Annex 4; ICAO Doc 8697
1.6.6	Differentiate between the various relevant charts and state their specific use.	2	Charts provided by AIS, AIP charts, national and military aeronautical charts.	
1.6.7	State the ICAO categories for instrument approach charts.	1	Categories A, B, C, D – approach speeds.	ICAO Doc 8168
<p>2. ARO and AERODROME AIS UNITS</p> <p>The general objectives are to enable students to: Understand the function of the Air Traffic Services Reporting Office (ARO); Understand the function of the Aerodrome AIS Unit; Recognise the information required by pilots prior to a flight.</p>				
2.1 ATS reporting office and Aerodrome AIS Unit				

2.1.1	State the main functions of an Air Traffic Services Reporting Office (ARO).	1	Flight plan acceptance.	
2.1.2	State the main functions of an Aerodrome AIS Unit.	1	Pre-flight briefing, post flight information.	
2.1.3	Specify the requirements for the physical location of an ARO/Aerodrome AIS Unit.	1		Doc 8126
2.1.4	Describe the coverage zone of an ARO/Aerodrome AIS Unit.	2		Doc 8126
2.1.5	List the detailed information to be held.	1		ICAO Annex 15; ICAO Doc 8126
	2.2 Flight plans			
2.2.1	Define flight plan.	1		ICAO Annex 2
2.2.2	Differentiate the types of flight plan.	2	FPL, AFIL, RPL.	ICAO Doc 4444
2.2.3	Recognise ICAO model flight plan form.	1		ICAO Doc 4444
2.2.4	List the items contained in a flight plan.	1	Items and their denomination.	ICAO Annex 2; ICAO Doc 4444
2.2.5	Differentiate the three parts of a flight plan form.	2	Section COM, ATS data and supplementary information.	
2.2.6	Recognise the AFTN format (including supplementary information).	1	AFTN format, Flight plan AFTN message.	ICAO Doc 4444
2.2.7	Describe the conditions under which a flight plan shall be submitted.	2	Rules of the Air; national differences.	ICAO Annex 2
2.2.8	State the times when a flight plan has to be submitted.	1	Rules of the Air; national and regional differences regional differences.	ICAO Annex 2; ICAO Doc 7030
2.2.9	Explain the procedure for the submission of a flight plan.	2		ICAO Doc 4444
2.2.10	List the categories of ATS messages.	1	Emergency, movement/control and flight information messages.	ICAO Doc 4444
2.2.11	List the flight plan associated messages.	1		ICAO Doc 4444
	2.3 Flight crew information			
2.3.1	State the responsibility of pilots to obtain pre-flight briefing.	1		ICAO Annex 2; ICAO Annex 6
2.3.2	Be familiar with the flight preparation of a pilot.	0	Aircraft and equipment serviceability. Fuel, passenger and cargo manifest. AIS and MET briefing.	ICAO Annex 6

2.3.3	List methods of briefing.	1	Self-briefing (internet); personal, telephone, fax.	
2.3.4	State the purpose of post-flight information.	1		ICAO Annex 15; ICAO Doc 8126
3. GENERAL DATA MANAGEMENT				
The general objectives are to enable students to: Receive and process incoming data; Determine the method of publication; Distribute data for further processing.				
3.1 Working procedures				
3.1.1	Explain the need for working procedures.	2	Uniformity, reduction of errors, mistakes and duplication of work.	
3.1.2	Describe local working procedures.	2	e.g. Special filing procedures, local lists, checks for completeness, additional duties during night shift, etc.	Local procedures
3.1.3	Apply local working procedures.	3		
3.2 Emergency procedures				
3.2.1	Describe procedures applicable in the event of equipment failure.	2	Hardware.	Local procedures
3.2.2	Describe procedures applicable in the event of the loss or nonreception of critical data.	2	Software and hardware.	Local procedures
3.2.3	Describe procedures applicable in the event of a severe threat to the AIS unit.	2	e.g. Fire, emergency evacuation, Local Quick Reference Handbook.	Local procedures
3.2.4	Select the appropriate checklists for the above emergency situations.	3	Local Quick Reference Handbook.	Local procedures
3.3 Operation of equipment and software				
3.3.1	List the equipment and applications in use at the AIS unit.	1	Hardware and software.	
3.3.2	Describe the use of the various applications.	2	Software packages for AIS systems.	
3.3.3	Describe the use of the various items of equipment.	2		
3.3.4	Operate the equipment.	3	Simulated and/or under supervision.	

3.4 Error indications (computer, software)				
3.4.1	Recognise the most significant error messages given by the software applications in use at the AIS unit.	1		Local procedures
3.4.2	Describe the significance of error messages given by the software applications in use at the AIS unit.	2		Local procedures
3.4.3	Take appropriate corrective action.	3		Local procedures
3.5 Encode/decode aeronautical information				
3.5.1	Encode and decode ICAO "abbreviations and codes".	3		ICAO Doc 8400
3.5.2	Encode and decode national "abbreviations and codes".	3		National AIP; GEN 2
3.5.3	Encode and decode ICAO Location Indicators.	3		ICAO Doc 7910
3.5.4	Encode and decode ICAO Aircraft Type Designators.	3		ICAO Doc 8643
3.5.5	Encode and decode ICAO chart symbols.	3		ICAO Annex 4
3.5.6	Encode and decode national chart symbols.	3		National AIP GEN 3
3.5.7	Encode and decode NOTAM qualifiers.	3	NSC and Q-line.	ICAO Doc 8126
3.5.8	Encode and decode NOTAM items.	3	Items A-G.	ICAO Annex 15
3.5.9	Encode and decode SNOWTAM, ASHTAM, (BIRDTAM) items.	3	Items A-T.	ICAO Annex 15; SNOWTAM Harmonisation Guidelines
3.6 Translate aeronautical information				
3.6.1	Translate aeronautical information using appropriate ICAO terminology.	3	Translate into English and/or local language.	ICAO Doc 9713
3.7 Perform quality checks on raw data and aeronautical information				
3.7.1	Verify the raw data.	3	Authorised source, completeness, accuracy, validity, etc.	ICAO Annex 15; ADP and SDP; ICAO Doc 8126
3.7.2	Verify completeness, validity and presentation of aeronautical information.	3	<i>Note: Refers to product before distribution.</i>	
3.8 Process post-flight information				
3.8.1	Describe the method of	2		ICAO Annex 15;

	processing post-flight information.			ICAO Doc 8126
3.8.2	Process post-flight information.	3		
3.9 Provide data for compiling statistical data				
3.9.1	Select the required data for compiling statistical data.	3		Local procedures
3.9.2	Retrieve the required data for compiling statistical data.	3		Local procedures
3.9.3	Deliver the required data for compiling statistical data.	3		Local procedures
3.10 Ensure traceability of data/aeronautical information				
3.10.1	Explain the need for recording and filing raw data.	2		ICAO Doc 8126; EUROCONTROL ADP and SDP
3.10.2	Describe the procedures to ensure traceability of data/aeronautical information.	2		Local procedures
3.10.3	Apply the procedures to ensure traceability of data/aeronautical information.	3		
3.10.4	Detect data anomalies or errors.	3		
3.10.5	Correct data anomalies or errors.	3		Local procedures
3.11 Process raw data				
3.11.1	List the authorised sources of raw data.	1		ICAO Doc 8126
3.11.2	Describe the type of data originating from authorised sources of raw data.	2		
3.11.3	List channels of communication for the submission of raw data.	1	Fax, email, mail, AFTN, etc.	ICAO Doc 8126
3.11.4	Verify that the raw data to be published by AIS comes from an appropriate originator.	3		ICAO Annex 15; Local procedures
3.11.5	Describe the process used for filing raw data.	2		Local procedures
3.11.6	File raw data.	3		
3.11.7	Describe the process of verifying the raw data.	2		ICAO Annex 15; EUROCONTROL ADP and SDP
3.11.8	Verify raw data.	3		
3.11.9	Describe the criteria to be applied for determining the categories of information.	2	Basic, permanent, temporary and of short duration, temporary and of long duration.	ICAO Doc 8126

			Information of an explanatory, advisory or administrative nature.	
3.11.10	Associate the categories of information with the methods of publication.	3	AIP + AMDT, AIC, SUP, NOTAM and charts.	ICAO Annex 15
3.11.11	Select the means of publication.	3		
3.11.12	Determine if proposed publication/effective date can be met.	3		Local procedures
3.11.13	Request a new publication date if necessary.	3	Co-ordinate a new publication/ effective date when the proposed publication/effective date cannot be met	Local procedures
3.11.14	Describe the process of data distribution for further processing.	2		Local procedures
3.11.15	Distribute the data for further processing.	3		Local procedures
<p>4. STATIC DATA</p> <p>The general objectives are to enable students to: Describe and explain the purpose, function and significance of static data; Store static data in a database; Provide required static data for other databases.</p>				
4.1 Significance of static data				
4.1.1	Explain the purpose, function and significance of static data.	2		ICAO Doc 8126;
4.2 Compile positional data				
4.2.1	Explain the requirements for the formatting and resolution of positional data.	2		ICAO Annex 15; ICAO Doc 812;6 ICAO Annex 4
4.2.2	Convert positional data into the required format and resolution.	3		ICAO Doc 9674; ICAO Doc 8126; ICAO Annex 4
4.3 Store static data (including positional data)				
4.3.1	Describe the procedures for storing static data.	2		Local Database Manual
4.3.2	Describe the criteria to be applied for storing data into the database.	2		Local Database Manual
4.3.3	Store data in the database.	3		Local Database Manual
4.4 Maintain database of static data				

4.4.1	Describe the model of the database used.	2	ORACLE, SQL, SAP Relational databases, Connection to GIS, AICM/AIXM	Local Database Manual
4.4.2	Describe the structure of the database used.	2		Local Database Manual
4.4.3	Operate the database used.	3		Local Database Manual
4.4.4	Describe the quality checks carried out on the data base.	2	Automatic or manual.	Local Database Manual; Local procedures
4.4.5	Carry out quality checks.	3		Local procedures
4.4.6	Compile the necessary reports/notifications on changes in the database.	3		Local procedures
4.4.7	Transmit the reports/notifications to database users.	3		Local procedures
4.4.8	Record updates to the static data database.	3		Local procedures
4.5 Maintain the library of foreign AIS publications				
4.5.1	Describe the procedures for updating the library of foreign AIS publications.	2		Local procedures
4.5.2	Update the library of foreign AIS publications.	3		Local procedures
4.5.3	Record updates made to the library of foreign AIS publications.	3		Local procedures
4.6 Prepare static data for other national and international databases				
4.6.1	List the requirements of the EAD for static data.	1		EAD User manual SDO DP Operational User Handbook DP
4.6.2	Describe the process of updating the EAD data base.	2		EAD User manual SDO DP; Operational User Handbook DP
4.6.3	Select the required static data for EAD.	3		Local procedures
4.6.4	Provide static data to EAD.	3		EAD User manual SDO DP; Operational User Handbook DP
4.6.5	Explain the requirements of national databases for static data.	2		Local procedures
4.6.6	Describe the process of updating other national databases.	2		Local procedures
4.6.7	Select the required static data for other national databases.	3		Local procedures

4.6.8	Provide static data to other national databases.	3		Local procedures
4.6.9	Record the provision of static data to other national database.	3		Local procedures
<p>5. DYNAMIC DATA</p> <p>The general objectives are to enable students to:</p> <ul style="list-style-type: none"> Describe and explain the purpose, function and significance of dynamic data; Prepare, distribute and store outgoing dynamic data; Receive process and store incoming dynamic data. 				
5.1 Significance of dynamic data				
5.1.1	Explain the purpose, function and significance of dynamic data.	2		
5.2 General				
5.2.1	State NOTAM types.	1	NOTAM -N, -R and -C.	ICAO Doc 8126;
5.2.2	Explain the application of NOTAM -N, -R and -C.	2		ICAO Doc 8126;
5.2.3	State NOTAM series and number.			ICAO Annex 15; National series assignment
5.2.4	Describe NOTAM item content.	2	Item Q) and Items A) to G).	ICAO Annex 15
5.2.5	Explain the purpose of NOTAM qualifiers (Q-Line).		NOTAM Selection Criteria (NSC), automation.	ICAO Doc 8126
5.2.6	State the general rules relating to NOTAM qualifiers.	1		ICAO Doc 8126;
5.2.7	Describe the content of NOTAM qualifiers.	2	FIR, NOTAM code, traffic, purpose, scope, lower/upper, geographical reference, radius.	ICAO Annex 15;
5.3 Process foreign dynamic data				
5.3.1	Convert NOTAM received into a correctly formatted system NOTAM.	3		Local procedures
5.3.2	Check all items of incoming NOTAM.	3	Syntax.	Local procedures
5.3.3	Translate Item E into English.	3		Local procedures
5.3.4	Clarify erroneous and/or ambiguous NOTAM content.	3	Check with NOTAM originator.	Local procedures
5.3.5	Check NOTAM sequence.	3	Manually or semi-automatically.	Local procedures

5.3.6	Request missing NOTAM.	3	Investigation, time limit.	Local procedures
5.3.7	Explain the purpose of a NOTAM database.	2	NOTAM production, PIB.	ICAO Doc 8126
5.3.8	Describe NOTAM storage	2	Electronic, manual.	Local procedures
5.3.9	State the area of coverage of a NOTAM database.			
5.3.10	Describe quality control procedures.			
5.3.11	Carry out quality control checks.			
5.3.12	Explain the requirement to redistribute NOTAM.			
5.3.13	Describe procedures for NOTAM re-distribution.			
5.3.14	Address NOTAM for redistribution.			Local procedures
5.3.15	Re-distribute NOTAM.			
5.3.16	Identify foreign checklists.			Local procedures
5.3.17	Describe procedures for comparing foreign checklists with stored NOTAM.		Semi-automatic or manual.	Local procedures
5.3.18	Store foreign NOTAM.			Local procedures
5.4 Publish NOTAM				
5.4.1	Analyse NOTAM proposal for further processing.	3		Local procedures
5.4.2	Allocate NOTAM series, number and type.	3		Local procedures
5.4.3	Encode the qualifier line and all identifiers.	3	NOTAM Selection Criteria.	ICAO Doc 8126; Local procedures
5.4.4	Complete all NOTAM items.	3		ICAO Doc 8126;
5.4.5	Address NOTAM.	3		Local procedures
5.4.6	Describe procedures for NOTAM distribution.	2		Local procedures
5.4.7	Distribute NOTAM.	3		ICAO Doc 8126;
5.4.8	Store published NOTAM in NOTAM database.	3		Local procedures
5.5 Publish NOTAM checklist				
5.5.1	Explain the rules for producing a NOTAM checklist.	2		ICAO Doc 8126; ICAO Annex 15;
5.5.2	Produce a NOTAM checklist.	3	Manual or automatic.	Local procedures;
5.5.3	Address a NOTAM checklist.			Local procedures;
5.5.4	Distribute a NOTAM checklist.			ICAO Doc 8126; Local procedures;
5.5.5	Store published NOTAM checklist in NOTAM database.			Local procedures;
5.6 Publish Trigger NOTAM				

5.6.1	Explain the purpose of 'trigger' NOTAM.			
5.6.2	Describe 'trigger' NOTAM procedures relevant to AIRAC Amendment.			ICAO Doc 8126; Local procedures
5.6.3	Describe trigger NOTAM procedures relevant to AIP Supplements.			ICAO Doc 8126; Local procedures
5.6.4	Produce 'trigger' NOTAM.			ICAO Doc 8126
5.6.5	Address 'trigger' NOTAM.			Local procedures
5.6.6	Distribute 'trigger' NOTAM.			Local procedures
5.6.7	Store the published 'trigger' NOTAM checklist in the NOTAM database.			Local procedures
5.7 Publish SNOWTAM				
5.7.1	Explain the purpose of 'SNOWTAM'.	2		ICAO Annex 15;
5.7.2	Name the originator(s) of raw data for SNOWTAM.	1		
5.7.3	Describe the methods of obtaining raw data for SNOWTAM.	2		
5.7.4	Describe the methods by which data for SNOWTAM is transmitted to AIS.	2		
5.7.5	Complete SNOWTAM form.	3		
5.7.6	Address SNOWTAM.	3		
5.7.7	Distribute SNOWTAM.	3		
5.7.8	Store the published SNOWTAM in NOTAM database.	3		
5.8 Publish ASHTAM				
5.8.1	Explain the purpose of 'ASHTAM'.	2		Local procedures
5.8.2	Name the originator(s) of raw data for ASHTAM.	1		Local procedures
5.8.3	Explain the methods of obtaining raw data for ASHTAM.	2		Local procedures
5.8.4	Describe the methods by which data for ASHTAM is transmitted to AIS.	2		Local procedures
5.8.5	Complete ASHTAM format.	3		ICAO Annex 15; Local procedures
5.8.6	Address ASHTAM.	3		Local procedures
5.8.7	Describe procedures for ASHTAM distribution.	2		Local procedures
5.8.8	Distribute ASHTAM.	3		Local procedures
5.8.9	Store published ASHTAM in NOTAM database.	3		Local procedures

5.9 Produce PIB				
5.9.1	Describe the content of an area bulletin.	2	NOTAM, ASHTAM.	ICAO Doc 8126
5.9.2	Describe the content of a route bulletin.	2	NOTAM, ASHTAM.	ICAO Doc 8126
5.9.3	Describe the content of an aerodrome bulletin.	2	NOTAM, SNOWTAM, METAR, TAF.	ICAO Doc 8126
5.9.4	Describe the content of an administrative bulletin.	2		ICAO Doc 8126
5.9.5	Explain the procedure for the preparation of a PIB.	2		ICAO Doc 8126
5.9.6	Access relevant data for PIB production.	3		Local procedures
5.9.7	Retrieve selected data for PIB production.	3		Local procedures
5.9.8	Compile PIB.	3		Local procedures
5.9.9	Transmit PIB to customer.	3		Local procedures
5.10 Prepare tailored dynamic data				
3.10.1	Access relevant data for tailored dynamic data production.	3		Local procedures
3.10.2	Retrieve selected data for tailored dynamic data production.	3		Local procedures
3.10.3	Compile tailored dynamic data.	3		Local procedures
3.10.4	Transmit tailored dynamic data to customer.	3		Local procedures
<p>6. PUBLICATIONS</p> <p>The general objectives are to enable students to:</p> <ul style="list-style-type: none"> Describe and explain the processes and procedures for the preparation of aeronautical publications; Process incoming data for publication; Prepare, distribute and store publications. 				
6.1 General procedures				
6.1.1	Describe the appropriate form for the publication of aeronautical information.	2	AIP, AIP Amendment, AIP Supplement, AIRAC, AIC.	ICAO Doc 8126; Local procedures
6.1.2	Describe the process for preparing the master copy.	2	Proof-reading, authorisation procedure.	ICAO Doc 8126
6.1.3	Describe the process for the reproduction of publications.	2	Electronic pre-press, offset printing, digital printing, analogue photocopying.	ICAO Doc 8126; Local procedures
6.1.4	Describe the procedure for	2		Local procedures

	transferring the copy to the printing office.			
6.1.5	Describe the procedure for distributing printed/electronic publications.	2		Local procedures; eAIP Specification
6.1.6	Describe the procedure for maintaining the library of valid printed/electronic publications.	2	AIP, AIC, SUPs, etc.	Local procedures; eAIP Specification
6.1.7	Describe the procedure for maintaining the archive of cancelled/replaced publications.	2	AIP, AIC, SUPs, etc.	Local procedures
6.2 Publish AIC				
6.2.1	Describe the information to be notified by an AIC.	2		ICAO Annex 15; ICAO Doc 8126; Local procedures.
6.2.2	Describe the procedure for publishing an AIC checklist.	2		ICAO Doc 8126
6.2.3	Describe the format of an AIC.	2	International and national series.	ICAO Doc 8126
6.3 Publish AIP				
6.3.1	Describe the structure of the AIP.	2	GEN, ENR, AD.	ICAO Annex 15; ICAO Doc 8126,
6.3.2	List in detail the aeronautical information contained in each section of Part 1 - General (GEN).	1		ICAO Annex 15; ICAO Doc 8126; National AIP
6.3.3	List in detail the aeronautical information contained in each section of Part 2 - En-route (ENR).	1		ICAO Annex 15; ICAO Doc 8126; National AIP
6.3.4	List in detail the aeronautical information contained in each section of Part - 3 Aerodromes (AD).	1		ICAO Annex 15; ICAO Doc 8126; National AIP
6.3.5	Determine the section(s) or subsection(s) of the AIP to which aeronautical information applies.	3		ICAO Annex 15; ICAO Doc 8126; National AIP
6.3.6	Select chart(s) to be inserted in an appropriate section(s) or subsection(s) of the AIP.	3		ICAO Annex 15; ICAO Doc 8126
6.3.7	Describe the methods by which an AIP is updated.	2	AIP Amendment, AIP Supplement, AIRAC, NOTAM, eAIP.	ICAO Annex 15; eAIP Specification
6.3.8	Differentiate between AIP Amendment and AIP Supplement.	2	Permanent or temporary change.	ICAO Annex 15; ICAO Doc 8126
6.4 Publish AIP AMENDMENT				
6.4.1	Describe the information contained in an AIP Amendment.	2		ICAO Annex 15; ICAO Doc 8126

6.4.2	Describe the format of an AIP Amendment.	2		ICAO Doc 8126
6.4.3	Explain the AIRAC system.	2		ICAO Annex 15; ICAO Doc 8126
6.4.4	Describe what type of information shall be notified by AIRAC.	2		ICAO Annex 15; ICAO Doc 8126
6.4.5	Differentiate between information to be issued by AIP Amendment or AIRAC AIP Amendment.	2	Operationally significant information, AIRAC notifications, effective and publication dates, numbering, color of over-page.	ICAO Doc 8126
6.4.6	Adhere to the significant dates for AIRAC publication.	3	Effective, publication and latest dates.	ICAO Doc 8126; Local procedures
6.5 Publish AIP SUPPLEMENT				
6.5.1	Describe the aeronautical information contained in an AIP Supplement.	2		ICAO Doc 8126
6.5.2	Describe the format of an AIP Supplement.	2		ICAO Doc 8126
6.5.3	Describe the procedure for publishing AIP Supplements checklist.	2		ICAO Doc 8126
6.5.4	Determine what kind of information shall be notified by AIP Supplements.	3		ICAO Annex 15; ICAO Doc 8126
6.6 Publish additional information for specific purposes				
6.6.1	Describe the procedure for compiling a publication with additional information for specific purposes.	2		Local procedures
<p>7. CHARTING</p> <p>The general objectives are to enable students to:</p> <ul style="list-style-type: none"> Describe and explain the purpose, function and significance of charting; Process incoming data for charting; Prepare, distribute and store charts. 				
7.1 General introduction				
7.1.1	Explain the purpose and significance of charting.	2		ICAO Annex 4
7.1.2	Describe the main characteristics of aeronautical charts.	2	Scale, format, coverage, size, layout, conformity.	ICAO Annex 4
7.1.3	List different types of Aeronautical charts.	3		ICAO Annex 4

7.1.4	Describe contents of different aeronautical charts.	3		ICAO Annex 4
7.1.5	Decode the data depicted on charts.	3	Use of data; interpretation, legend.	ICAO Annex 4 ICAO Doc 8126 ICAO Doc 8697
7.1.6	Differentiate between the ICAO categories for instrument approach charts.	2		ICAO Doc 8168
7.1.7	Describe the process for chart production.	2		Local procedures
7.2 Updating existing charts				
7.2.1	Select chart(s) to be updated.	3		Local procedures
7.2.2	Select a method of updating.	3	Chart update or hand-amendment	Local procedures
7.2.3	Allocate appropriate symbol to aeronautical information.	3	Appropriate chart symbol.	ICAO Annex 4
7.2.4	Insert new data and/or change existing data.	3		ICAO Annex 4 Local procedures
7.2.5	Adapt the layout accordingly.	3	Layout, display data for the best presentation.	ICAO Doc 8697
7.3 Creating new charts				
7.3.1	Determine the area to be covered.	3	Coverage and scale.	ICAO Annex 4
7.3.2	Verify availability of basic map data.	3	Topographical data.	Local procedures
7.3.3	Apply the appropriate format according to the type of the chart required.	3	Format.	ICAO Annex 4 ICAO Doc. 8697
7.3.4	Determine magnetic variation.	3		Local procedures
7.3.5	Compile aeronautical information/data.	3		Local procedures
7.3.6	Allocate appropriate symbol to aeronautical information.	3	Appropriate chart symbol.	ICAO Annex 4
7.3.7	Adapt the layout accordingly	3	Layout, display data for the best presentation.	ICAO Doc 8697
7.3.8	Edit / produce prototype chart	3	If in-house production.	ICAO Doc 8697
7.3.9	Prepare chart production order for a cartographer	3	If external production.	Local procedures
7.4 Verification of updated or new charts				
7.4.1	Verify completeness, accuracy and presentation of the chart	3	Perform Quality checks.	Local procedures
7.4.2	Verify the updated or new chart with originator	3		Local procedures
7.4.3	Prepare printing order	3		Local procedures
7.4.4	Print chart	3		Local procedures
7.4.5	Provide chart for distribution in requested format/ media	3		Local procedures

	7.5 Maintain aeronautical chart library			
7.5.1	File charting documentation.	3		Local procedures
	<p>8. ARO FUNCTIONS</p> <p>The general objectives are to enable students to:</p> <ul style="list-style-type: none"> Receive, verify and process incoming data; Prepare and conduct an appropriate and complete briefing. 			
	8.1 Process FPL and FPL associated messages			
8.1.1	Explain all the items of a flight plan form.	2	Items and their content.	ICAO Doc 4444
8.1.2	State the cruising speeds of the most common types of aircraft.	1	Especially the most common local aircraft.	Local procedures
8.1.3	Decode FPL items.	3		ICAO Doc 4444
8.1.4	Encode FPL items.	3		ICAO Doc 4444
8.1.5	Verify all items of a flight plan.	3		ICAO Doc 4444;
8.1.6	Describe the procedures for addressing a flight plan.	2		ICAO Doc 7910;
8.1.7	Address a flight plan.	3		ICAO Doc 7910;
8.1.8	Apply the flight plan filing time procedures.	3	1hr, 3hr and national regional and local regulations, delays and earlier departures.	ICAO Annex 2; National AIP; ICAO Doc 7030;
8.1.9	Apply flight plan transmission procedures.	3	e.g. AFTN format, local procedures.	ICAO Doc 4444; ICAO Annex 10
8.1.10	List relevant CFMU limitations when filing a flight plan.	1	CIA, ANM, CRAM, AIM, SLOT, etc. RAD and ENV database.	
8.1.11	Describe the categories of ATS messages.	2	ATS or FPL.	ICAO Doc 4444
8.1.12	Differentiate the types of ATS messages and their designator.	2	ATS or FPL.	ICAO Doc 4444
8.1.13	Prepare flight plan associated messages.	3		ICAO Doc 4444
8.1.14	Address FPL associated messages.	3		ICAO Doc 4444
8.1.15	Apply flight plan associated messages transmission procedures.	3	AFTN format, local procedures.	ICAO Doc 4444; ICAO Annex 10
8.1.16	Prepare supplementary messages.	3		ICAO Doc 4444
8.1.17	Address supplementary messages.	3		ICAO Doc 4444
8.1.18	Apply supplementary messages transmission procedures.	3	AFTN format, local procedures.	ICAO Doc 4444; ICAO Annex 10
8.1.19	Describe methods of storage for a flight plan and ATS messages.	2	Manual or electronic.	Local procedures

8.1.20	Store flight plan and ATS messages.	3		Local procedures
8.1.21	Explain the purpose of a repetitive flight plan (RPL).	2		ICAO Doc 4444
8.1.22	Describe all the items contained in a RPL.	2		ICAO Doc 4444
8.1.23	Explain the collection, storage and processing of RPL data.	2	Manual or electronic.	ICAO Doc 4444; ICAO Annex 10;
8.1.24	Explain the implications for a flight plan with a special status.	2	STS/HOSP, Head of State, EXM833, etc.	
8.2 Provide information for flight preparation				
8.2.1	List the content of pre-flight information.	1	NOTAM, SNOWTAM, ASHTAM, NAT tracks, MET info, charts, ATFM messages, national publications.	
8.2.2	Explain the scope of the available briefing material.	2		
8.2.3	Appreciate the significance of a briefing for the customer.	2		
8.2.4	Locate the required information in the appropriate documentation.	3	AIP, AIC, Charts, etc.	
8.2.5	Retrieve required information from the data base.	3	VFR, IFR, national or international flight, etc.	
8.2.6	Communicate the required information to the customer using the appropriate technique.	3	Compile and print out, face to face, fax, phone, email, etc.	
8.2.7	Provide additional information on request.	3	Update service.	
8.3 Accept post-flight information and transmit it to ATS/AIS				
8.3.1	Accept post-flight information.	3	Incident/accident reports, landing information and general in-flight reports.	ICAO Annex 15; ICAO Doc 8126
8.3.2	Transmit post-flight information to ATS/AIS.	3		Local procedures
8.4 Support incident investigation (ARO side)				
8.4.1	Explain the procedures for the handling of an incident report form.	2		ICAO Doc 4444; ICAO Doc 9426; Local procedures; National AIP
8.4.2	Accept incident report forms.	3		Local procedures
8.4.3	Transmit the incident report forms to the appropriate authority.	3		Local procedures
8.4.4	Describe the procedures applicable in support of investigations.	2	Role of ARO in conjunction with other units and or police.	Local procedures
8.4.5	Apply the procedures applicable in	3		Local procedures

	support of investigations.			
8.5 Compile statistical data				
8.5.1	List the type of statistical data required from ARO.	1		Local procedures
9. COORDINATION				
The general objectives are to enable students to: Identify when co-ordination has to be performed; Conduct coordination in an appropriate manner.				
9.1 General				
9.1.1	Explain the need for co-ordination.	2		
9.1.2	Explain the methods of coordination.	2	Face to face, phone, fax, email, internet, standardised procedures, language used, records/log sheet, etc.	Local procedures
9.1.3	Use appropriate coordination techniques.	3	Verbal, written etc.	Local procedures
9.1.4	Describe the interaction with other data systems.	2	Data links, EAD, pre-flight database, online applications etc.	Local procedures
9.2 Co-ordinate with data sources				
9.2.1	Clarify erroneous and/or ambiguous content with the source of the data.	3	SLA's	Local procedures;
9.2.2	Request missing elements.	3	SLA's	Local procedures
9.3 Co-ordinate between AIS functions				
9.3.1	Describe the principle functions within AIS.	2	AIS functions.	ICAO Doc 8126
9.3.2	Determine when/what to coordinate with other AIS functions.	3	AIS functions at local and adjacent units.	Local procedures
9.4 Co-ordinate with customers				
9.4.1	List the principle customers of an AIS unit.	1	AOs, private pilots, ATC, handling companies, other AIS units local/foreign etc.	ICAO Doc 8126
9.4.2	Characterise the customers of the AIS unit.	2	e.g. Professional, non-professional, frequent or infrequent	

			user, etc.	
9.4.3	Describe co-ordination procedures with ATS units.	2	TWR, APP, ACC, FIC, SLA's.	Local procedures
9.4.4	Describe co-ordination procedures with other agencies/services.	2	MET, technical services, aircraft operators, CFMU, regulator, SLA's etc.	ICAO Doc 9377; Local procedures;
9.4.5	Communicate the required information to the customer.	3		Local procedures
9.4.6	Clarify the meaning of the information provided, if requested.	3		Local procedures
9.4.7	Provide any additional information if requested.	3		Local procedures
9.5 Human factors aspects in co-ordination				
9.5.1	State factors affecting the quality of communication.	1		ICAO Doc 9683
9.5.2	Identify communication and thinking patterns.	1		
9.5.3	Explain common behavioural patterns of customers.	2		
9.5.4	Select the appropriate way for dealing with customers.	3		
9.5.5	Apply the rules for concise communication.	3		
9.5.6	Demonstrate correct behaviour in a conflict situation.	3		
9.5.7	Demonstrate correct handling of customer complaints.	3		