



AERODROME, AREA, AND APPROACH (PROCEDURAL AND SURVEILLANCE) Control Course

STUDY PROGRAM

Study Program

1. TITLE OF THE ACADEMIC PROGRAM.

Aerodrome, Area and Approach (Procedural and Surveillance) Control Course
(Haiti).
Código: AAAPSCC08231

2. GENERAL OBJECTIVE.

At the end of the course, students will be able to begin the On-the-Job Training process (OJT) to provide the Air Traffic Control Services (Aerodrome, Area, and Approach) using an ATS Surveillance System, where applicable, according to the ICAO SARPs.

3. GRADUATE PROFILE.

Once the theoretical and practical instruction is finished, completing the On Job Training (OJT) process, the student will be able to exercise the functions of Air Traffic Controller applying Control through the use of the ATS Surveillance System in the Area & Approach unit, as well at the Aerodrome Control Tower, ordering the traffic in a safe, orderly and fast way; maintaining discipline, ability to concentrate and memory, responsibility, emotional stability, assertive communication and, above all, demonstrate your ability to work in a team.

4. SPECIFIC OBJECTIVES.

1. Recognize the basic concepts related to the flight of an aircraft, according to the precepts and theoretical foundations of aerodynamics described in international documents.
2. Interpret any Aeronautical Chart used in IFR and VFR flights under the criteria established by ICAO.
3. Interpret the weather information, according with the national and international documents.
4. Master clearly the principles governing air navigation and the working principles of the systems and equipment on board aircraft to help in navigation.
5. Master the different definitions related to the rules of the air according to international documents.
6. Master the different definitions and terminologies related to Air Traffic Services, established in ICAO documents.

7. Master the different definitions, terminologies and procedures related to ATM, according to the ICAO Doc. 4444
8. Apply the phraseology according to the type of air traffic services, which is provided, considering ICAO documents.
9. Recognize the different definitions and terminologies related to human factors, according to the international documents.
10. Master definitions and concepts related to Aerodromes, according to ICAO documents.
11. Master terminologies and procedures used in aeronautical telecommunications, according to international documents and regulations.
12. Master the information of the integrated aeronautical information package, according to the ICAO documents.
13. Master the different types of data messages used by Air Traffic Services and their correct use as established in Chapter 11 of Doc. 4444 Air Traffic Management ICAO.
14. Master the operating framework for the SAR Stages and Phases of Emergency, which can be applied to strengthen the SAR coordination within their respective areas.
15. Master concepts and terminologies related to Aircraft Accident and Incident Investigation, according to ICAO documents.
16. Master the Haiti Airport Charts, according to Haiti AIP.

Theoretical Phase of the Area and Approach Control Course (Procedural & ATS Surveillance)

1. Master any Aeronautical Chart and the concepts about Performance-Based Navigation effectively under the criteria established by ICAO.
2. Master the structure of Haiti (MTEG) FIR, according to the Haiti AIP.
3. Master the basic elements of the Safety Management System (SMS), according to the ICAO international documents.
4. Master the phraseology relative to the area and approach control (procedural and ATS Surveillance), taking into account ICAO documents.
5. Apply the different methods and separation minima to be use on Area and Approach (procedural and/or surveillance) Control Service, according to the ICAO document 4444.

6. Apply the different separation minima in the vicinity of aerodromes to be use on Approach (procedural and/or surveillance) Control Service, according to the ICAO document 4444.
7. Apply the different procedures and separation minima to be use on Area and Approach Control Service using an ATS Surveillance System, according to the ICAO document 4444.
8. Master the concepts of the use of ADS-C, according to the ICAO document 4444.
9. Master the general concepts refers to chapter 16 of ICAO document 4444.

5. MODULAR STRUCTURE.

Theoretical Phase of the Aerodrome Control Course			
Module	HOURS		
	Theory	Practice	Total
Module 1. Aerodynamics	15	0	15
Module 2. Aeronautical Charts	10	0	10
Module 3. Meteorology	21	0	21
Module 4. Air Navigation	21	0	21
Module 5. Rules of the Air	21	0	21
Module 6. Air Traffic Services	21	0	21
Module 7. Air Traffic Management	150	0	150
Module 8. Radiotelephony and Aerodrome Phraseology	21	0	21
Module 9. Human Factors	14	0	14
Module 10. Aerodromes	28	0	28
Module 11. Aeronautical Telecommunications	14	0	14
Module 12. Aeronautical Information Services	14	0	14
Module 13. ATS Data Messages	14	0	14
Module 14. Search And Rescue Services	21	0	21
Module 15. Aircraft Accident and Incident Investigation	14	0	14
Module 16. Haiti Airports charts	21	0	21
Total	420	0	420
Theoretical Phase of the Area and Approach Control Course (Procedural & ATS Surveillance)			
Module	Hours		
	Theory	Practice	Total
Module 1. Aeronautical Charts and Terminal Procedures	14	0	14
Module 2. Haiti FIR	21	0	21
Module 3. SMS	14	0	14
Module 4. ATC Phraseology	07	0	07
Module 5. Separation methods and minima	21	0	21
Module 6. Separation in the vicinity of aerodromes	21	0	21
Module 7. ATS surveillance services	21	0	21
Module 8. Automatic dependent surveillance — contract (ADS-C) services and other system.	07	0	07
Module 9. Miscellaneous procedures	14	0	14
Total	140	0	140
Simulation Practice			
Module	Hours		
	Theory	Practice	Total
Aerodrome Simulation	0	240	240
Procedural Area & Approach Simulation	0	120	120
ATS Surveillance Area & Approach Simulation	0	120	120
Total	0	480	480

6. ENTRY REQUIREMENTS.

- Bachelor's degree.
- English language proficiency level 4 ICAO
- Have been selected by the Haitian air navigation authority.

7. METHODOLOGY.

Active-Participatory Method of Teaching and Learning with expositions of the instructor. The techniques use will be exposure, reading, independent study, dynamics, group discussions and role-plays.

There will be practical exercises (simulation) to verify the competencies.

8. INSTRUCTION RESOURCES.

- Projector.
- Flip Charts.
- Computers.
- Banners.
- Scale models.
- Aerodrome simulators.
- Non-RADAR and RADAR Simulators.

9. INSTRUCTORS.

ASCA TRAINAIR PLUS instructors will teach this program.

10. DURATION.

Theoretical hours: 560

Practical hours: 480

Total hours: 1,040.

32 weeks.

- 16 Weeks of Theoretical Instruction. Classes Monday to Friday (7 hours)
- 16 Weeks of Practical Instruction. Classes Monday to Friday (6 hours)

11. EVALUATION CRITERIA.

To obtain the certificate of the course the student should:

- Approve the corresponding evaluation for each module with 70 points or more.

- Approve the practical scheduled evaluations, within the simulation phase, with 80 points or more.

The theoretical content will be evaluated with tests at the end of each module: 100%.

The final practical evaluation will reflect the assimilation and use of the knowledge acquired during the whole course: 100%.

12. BIBLIOGRAPHY.

- ICAO Annex 2 Rules of the Air
- ICAO Annex 3 Meteorology.
- ICAO Annex 4 Aeronautical Charts.
- ICAO Annex 10 Telecommunications.
- ICAO Annex 11 Air Traffic Services.
- ICAO Annex 12 Search and Rescue
- ICAO Annex 13 Aircraft Accident and Incident Investigation
- ICAO Annex 14 Aerodrome.
- ICAO Annex 15 Aeronautical Information Service.
- ICAO Annex 19 SMS
- ICAO Document 4444 ATM
- ICAO Doc. 9432 Radiotelephony
- Doc. 9731-AN/958. *IAMSAR.Manual.*
- Doc. 9859 SMS

Practice Activity:

During the Practice Simulation, students develop the skills necessary to provide aerodrome and approach procedural control service in safe, orderly, and rapid way by applying the standards and recommended practices of ICAO.

Traffic scenarios will vary, starting with low-volume traffic scenarios to other more demanding and challenging scenarios.

Students will learn techniques for the correct organization of traffic in the maneuvering area as well as the phases of arrival and departure from the airport.

Students must successfully complete the theoretical phases of the course in order to access the practical phase of air traffic control simulation.

Students must successfully complete the Aerodrome Control phase before entering the Approach and Area Control phase through procedural and ATS surveillance.

13. MODULAR CONTENT.

Module 1. Aerodynamics.

Objective.

At the end of this module, the students will be able to recognize the basic concepts related to the flight of an aircraft, according to the precepts and theoretical foundations of aerodynamics described in international documents.

Content.

- Four forces acting on an airplane.
- Aircraft components.
- Aircraft systems.
- Aerodynamics.
- The Turn.
- The Stall.
- The Spin.
- Load factor.

Bibliography.

- ✓ ICAO Annex 2 Rules of the Air.
- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 2. Aeronautical Charts.

Objective.

At the end of the module will have the ability to interpret any Aeronautical Chart used in IFR and VFR flights under the criteria established by ICAO.

Content.

- Aeronautical Projections
- The Scale
- Chart Symbols
- Topographic Data
- Aeronautical Charts
- Types of charts according to the phases of flight

Bibliography.

- ✓ ICAO Annex 4 Aeronautical Charts.
- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 3. Meteorology.

Objective.

At the end of the module the students will be able to interpret the weather reports and reports in text, according with the national and international documents.

Content.

- Job Relevance
- Hazardous Weather
- Types of Reports
- Decoding Types of Reports

Bibliography.

- ✓ ICAO Annex 3 Meteorology.
- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 4. Air Navigation.

Objective.

Upon completion of this module students will have the ability to thoroughly master the principles governing air navigation and the operational principles of the systems and equipment on board aircraft that aid in navigation, according to the corresponding national and international documentation.

Content.

- Air Navigation Fundamentals.
- Air Navigation Types.
 - Visual Navigation (Pilotage)
 - Dead Reckoning.
 - Autonomous Navigation
 - Aids Based Navigation
 - Visual Aids
 - Satellite Navigation
- Planet Earth.
- Parallels and meridians.
- Geographical coordinates.
- Practical exercises
- Units of length and speed
- Compass Rose
- The wind
- Solar time
- Time zones
- Solar time exercises
- Time zone exercises
- The time in the air navigation.
- Time zone exercises
- Navigational equipment
- Course , track, and heading
- Speed on Air Navigation
- Endurance and range
- Non-Directional Beacon (NDB)
- VHF Omnidirectional Range (VOR)
- Distance Measuring Equipment (DME)
- ILS

Bibliography.

- ✓ ICAO Doc. 4444 Air Traffic Management.

- ✓ ICAO Annex 11 Air Traffic Services.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 5. Rules of the Air.

Objective.

At the end of the module the students will be able to master the different definitions related to the rules of the air according to ICAO Anexo 2.

Content.

International Standards
Chapter 1. Definitions
Chapter 2. Applicability of the Rules of the Air
Chapter 3. General Rules
Chapter 4. Visual Flight Rules
Chapter 5. Instrument Flight Rules
Signals for Aerodrome Traffic

Bibliography.

- ✓ ICAO Annex 2 Rules of the Air.
- ✓ ICAO Annex 11 Air Traffic Services.
- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 6. Air Traffic Services.

Objective.

At the end of this module, the students will master the different definitions and terminologies related to Air Traffic Services, established in ICAO documents.

Content.

- CHAPTER 1 Definitions
- CHAPTER 2 General
- CHAPTER 3 Application

Bibliography.

- ✓ ICAO Annex 11 Air Traffic Services.
- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 7 Air Traffic Management.

Objective.

At the end of the module students will be able to master the different definitions, terminologies and procedures related to ATM, according to the ICAO Doc. 4444.

Content.

- Definitions.
- ATS safety management.
- ATS system capacity and air traffic flow management.
- General provisions for air traffic services.
- Separation Methods and Minima.
- Procedures for aerodrome control service.
- Flight information service and alerting service
- Coordination
- Procedures related to emergencies, communication failure and contingencies

Bibliography.

- ✓ ICAO Annex 11 Air Traffic Services.
- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 8. Radiotelephony and Aerodrome Phraseology.

Objective.

At the end of this module, the students will be able to master the phraseology according to the type of air traffic services, which is provided, considering ICAO documents.

Content.

- General Operating Procedures.
- Communication Procedures
- Aerodrome Control Service Phraseology.

Bibliography.

- ✓ ICAO Doc. 9432 Radiotelephony.
- ✓ ICAO Doc. 4444 Air Traffic Management.
- ✓ ICAO Annex 11 Air Traffic Services.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 9. Human Factors.

Objective.

At the end of the module, the students will be able to recognize the different definitions and terminologies related to human factors, according to the international documents.

Content.

- The Shell Model
- Liveware - The Individual
- Liveware-liveware Interface
- Liveware-hardware Interface
- Liveware-software Interface
- Liveware-environment Interface
- The Swiss Cheese Model
- The “Dirty Dozen”
- Threat and Error Management (TEM)
- Teamwork.

Bibliography.

- ✓ Doc. 9683 (Human Factors Manual).
- ✓ Doc. 9808 (Operational Safety Manual).

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 10. Aerodrome.

Objective.

At the end of the module the students will be able to master definitions and concepts related to Aerodromes, according to ICAO documents.

Content.

- Definitions
- Aerodrome reference point
- Aerodrome and runway elevations
- Aerodrome reference temperature
- Integral parts of an aerodrome
- Runways
- Clearways
- Stopways
- Taxiways
- Isolated aircraft parking position
- Declared distances
- Obstacle restriction and removal
- Objects outside the obstacle limitation surfaces
- Other objects
- Visual Aids for Navigation
- Runway designation marking
- Runway Centre Line Marking
- Threshold marking
- Aiming point marking
- Touchdown zone marking
- Runway side stripe marking
- Taxiway centre line marking
- Runway turn pad marking
- Runway-Holding position marking
- Intermediate Holding position marking
- VOR Aerodrome Checkpoint Marking
- Apron safety lines
- Mandatory instruction marking
- Information marking
- Lighting systems
- Stop Bars.
- Intermediate Holding Position Lights
- Taxiway Centre Line Markers

Bibliography.

- ✓ ICAO Annex 14 Aerodrome.
- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 11. Aeronautical Telecommunication.

Objective.

At the end of the module, the students will be able to master terminologies and procedures used in aeronautical telecommunications according to international documents and regulations.

Content.

- History
- Aeronautical Broadcasting
- General Procedures International Service
- Mobile Telecommunications Service
- Aeronautical Fixed Services
- Aeronautical fixed telecommunications network
- Aeronautical Message Handling System (AMHS)
- Unlike The AFTN / AMHS Systems
- Voice communications point to point
- Radio Bands
- Ionosphere
- CNS Aspects

Bibliography.

- ✓ ICAO Annex 10 Telecommunications.
- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 12. Aeronautical Information Services.

Objective.

At the end of the module, the students will be able to master the information of the integrated aeronautical information package, according to the ICAO documents.

Content.

- Introduction to Aeronautical Information Services.
- Uniformity and Aeronautical Information Exchange.
- Coordination with Related Services.
- Origin of Aeronautical Information.
- AIS Quality Management.
- Classification of Information According to its Scope.
- Relationship between the Character and the Type of Publication.
- Classification of the Information According to its Distribution.
- Purpose of the AIS.
- AIS Functions.
- Principal Documents used in the AIS.
- Areas of the Aeronautical Information Service.
- Definitions.
- Integrated Aeronautical Information Package.
- Aeronautical Information Publication (AIP) with its Corresponding Amendments.
- AIP Supplement.
- Aeronautical Information Circular (AIC).
- Pre-flight Information Bulletin (PIB).
- Checklists and List of Valid NOTAM.
- NOTAM.

Bibliography.

- ✓ ICAO Annex 15. Aeronautical Information Service.
- ✓ ICAO Doc. 8400. Abbreviations and Codes.
- ✓ ICAO Doc. 8126 Aeronautical Information Services Manual.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 13. ATS Data Messages.

Objective.

At the end of the module, the students will be able to recognize the different types of data messages used by Air Traffic Services and their correct use as established in Chapter 11 of Doc. 4444 Air Traffic Management ICAO.

Content.

- Need for communication.
- Use of the AFTN.
- Priority Indicator.
- Address.
- Filing Time.
- Originator Indicator.
- Preparation and Transmission of Messages.
- Messages category
- Emergency MSG.
- Stages of Coordination and Transfer Dialogue.
- Methods of Message Exchange.
- Movement and Control Messages.
- Flight Information Messages.

Bibliography.

- ✓ ICAO Annex 11 Air Traffic Services.
- ✓ ICAO Annex 10 Telecommunications.
- ✓ ICAO Doc. 4444 Air Traffic Management.
- ✓ ICAO Doc. 8400. Abbreviations and Codes.
- ✓ ICAO Doc. 9432 Radiotelephony.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 14. Search and Rescue Services.

Objective.

At the end of this module the students will be able to master the operating framework for the SAR Stages and Phases of Emergency, which can be applied to strengthen the SAR coordination within their respective areas, according national and international documents.

Content.

- General Concepts.
- Communications in SAR Operations.
- Search Operations.
- Rescue of Survivors and Legal Aspects.
- SAR Stages
- SAR Phases
- SAR mission planning
- Search Techniques

Bibliography.

- ✓ ICAO Annex 12 Search and Rescue.
- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 15. Aircraft Accident and Incident Investigation.

Objective.

At the end of this module, the students will be able to master concepts and terminologies related to Aircraft Accident and Incident Investigation, according to ICAO documents.

Content.

- Definitions.
- Protection of evidence, custody and removal of aircraft.
- Notification
- Investigation
- Final report
- ADREP Reporting
- Accident Prevention Measures

Bibliography.

- ✓ ICAO Annex 13 Aircraft Accident and Incident Investigation.
- ✓ ICAO Doc. 9756 Manual of Aircraft Accident and Incident Investigation.
- ✓ ICAO Doc. 9587. Policy and Guidance Material on the Economic Regulation of International Air Transport.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 16. Haiti Airports charts.

Objective.

At the end of this module, the students will be able to master the Haiti Airport Charts, according to Haiti AIP.

Content.

- MTPP CTR
- MTPP STARS
- MTPP IACS
- MTPP SIDS
- MTCH CTR
- MTCH STARS
- MTCH IACS
- MTCH SIDS

Bibliography.

- ✓ Haiti AIP.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Theoretical Phase of the Area and Approach Control Course (Procedural & ATS Surveillance)

Module 1. Aeronautical Charts and Terminal Procedures.

Objective.

At the end of the module, the students will recognize any Aeronautical Chart and the concepts about Performance-Based Navigation effectively under the criteria established by ICAO.

Content.

- Introduction.
- Characteristics of Aeronautical Charts.
- Classification of the Charts.
- Types of charts According to Phases of the Flight.
- Chart Symbols.
- Instrument Approach Charts.
- Performance-based Navigation (PBN).

Bibliography.

- ✓ ICAO Annex 4. “Aeronautical Charts”.
- ✓ ICAO Doc 9613. “Performance-based Navigation (PBN) Manual”. 4th edition, 2013.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 2. Haiti FIR

Objective.

At the end of the module, the students will be able to master the structure of Haiti (MTEG) FIR, according to the Haiti AIP.

Content.

- MTEG FIR/UIR
- Lower Airspace
- Upper Airspace
- Compulsory Points
- MTPP TMA

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 3. Safety Management System (SMS).

Objective.

At the end of the module, the students the students will obtain the necessary knowledge to master the basic elements of the Safety Management System (SMS), according to the ICAO international documents.

Content.

- Safety Management Fundamentals.
- The Evolution of Safety.
- Accident Causation.
- The organizational Accident.
- The Practical Drift.
- The SHELL Model.
- Safety Culture.
- Safety Space.
- Promotion and Assessment of a Safety Culture.
- Integration of Management Systems.
- Safety Reporting and Investigation.
- Integration of Management Systems.
- Safety Reporting and Investigation.
- Hazards.
- ICAO Safety Management SARPs.
- SMS Framework.
- Safety Risk Management.
- Safety Assurance.
- Safety Promotion.

Bibliography.

- ✓ ICAO Doc 9859, Safety Management Manual (SMM).
- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 4. ATC Phraseology.

Objective.

At the end of this module, the participants will be able to master the phraseology relative to the area and approach control (procedural and ATS Surveillance), taking into account ICAO documents.

Content.

- General ATC Phraseologies.
- Area Control Services Phraseologies.
- Approach Control Services Phraseologies.
- ATS Surveillance Service Phraseologies.
- Automatic dependent surveillance — contract (ADS-C) Phraseologies.

Bibliography.

- ✓ ICAO Doc. 4444 Air Traffic Management.
- ✓ ICAO Annex 11 Air Traffic Services.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 5. Separation Methods and Minima

Objective.

At the end of the module, the students will be able to apply the different methods and separation minima to be use on Area and Approach (procedural and/or surveillance) Control Service, according to the ICAO document 4444.

Content.

- Provisions for the separation of controlled traffic.
- Vertical separation.
- Horizontal separation.
- Separation of aircraft holding in flight.
- Minimum separation between departing aircraft.
- Separation of departing aircraft from arriving aircraft.
- Time-based wake turbulence longitudinal separation minima.
- Clearances to fly maintaining own separation while in Visual Meteorological Conditions (VMC).
- Essential traffic information.
- Reduction in separation minima.

Bibliography.

- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 6. Separation in the vicinity of aerodromes

Objective.

At the end of the module, the students will be able to apply the different separation minima in the vicinity of aerodromes to be use on Approach (procedural and/or surveillance) Control Service, according to the ICAO document 4444.

Content.

- Reduction in separation minima in the vicinity of aerodromes.
- Essential local traffic.
- Procedures for departing aircraft.
- Information for departing aircraft.
- Procedures for arriving aircraft.
- Information for arriving aircraft.
- Operations on parallel or near-parallel runways

Bibliography.

- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 7. ATS surveillance services

Objective.

At the end of the module, the students will be able to apply the different procedures and separation minima to be use on Area and Approach Control Service using an ATS Surveillance System, according to the ICAO document 4444.

Content.

- ATS surveillance systems capabilities.
- Situation display.
- Communications.
- Provision of ATS surveillance services.
- Use of SSR transponders and ADS-B transmitters.
- General procedures.
- Use of ATS surveillance systems in the air traffic control service.
- Emergencies, hazards, and equipment failures.
- Use of ATS surveillance systems in the approach control service.
- Use of ATS surveillance systems in the aerodrome control service.
- Use of ATS surveillance systems in the flight information service.

Bibliography.

- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 8. Automatic dependent surveillance — contract (ADS-C) services

Objective.

At the end of the module, the students will be able to master the concepts of the use of ADS-C, according to the ICAO document 4444.

Content.

- General.
- ADS-C ground system capabilities.
- ADS-C-related aeronautical information.
- Use of ADS-C in the provision of Air Traffic Control Service.
- Use of ADS-C in the application of separation minima.

Bibliography.

- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

Module 9. Miscellaneous procedures

Objective.

At the end of the module, the students will be able to master the general concepts refers to chapter 16 of ICAO document 4444.

Content.

- Responsibility in regard to military traffic.
- Responsibility in regard to unmanned free balloons.
- Air traffic incident report.
- Use of repetitive flight plans (RPLs).
- Strategic lateral offset procedures (SLOP).
- Notification of suspected communicable diseases, or other public health risk, on board an aircraft.

Bibliography.

- ✓ ICAO Doc. 4444 Air Traffic Management.

Evaluation.

The theoretical content will be evaluated with a test at the end of the module (100%).

NOTA 1:

Instructors of the practical phase of the course must, during the development of the theoretical phase, design and review exercises for the practical phase simulations, in accordance with the simulation matrix.

NOTA 2:

Matriz de simulaciones en proceso de preparación.