

Part I: Air Traffic Control Courses

Course (051)

Air Traffic Control Assistant/Basic

no	Subject
1	
2	Civil Air Law
3	Aviation Meteorology
4	navigation aids
5	principles of flight
6	Aerodromes & Heliports
7	Aeronautical Telecommunication
8	Rules of the Air
9	Human Factors
10	Air Navigation
11	Aeronautical Information Service
12	AIR Traffic Service
13	Air Navigation for CNS/ATM
14	Search and Rescue

Course Objectives

The trainee will be able after completing this course to reach a satisfactory level to meet the basic requirements for Air navigation services personnel. The trainee after successfully completion will be able to start training through the Aerodrome Control course, or the AIS other courses.



Course (052)

Atc License and Aerodrome Control

no	Subject
1	Aerodrome characteristics
2	Visual Aids
3	Aviation meteorology
4	Human Factors
5	Aerodrome Procedures And Strip marking
6	Separation and Control of departing and arriving traffic

Course Objectives

Given lectures and practical training in an Air Traffic Control Tower simulator, the trainees will be able to control aircraft in the vicinity of the aerodrome, resolve conflict and carry out all the necessary coordination to the standard required for entry to on job training for the aerodrome control rating.



Course (053)
Non-Radar Approach Control

no	Subject
1	Introduction to approach control service
2	Introduction to strip marking and phraseology
3	Separation
4	Altimeter setting procedure
5	Approach control procedures
6	Coordination
7	Meteorology
8	Emergency
9	Practical exercises

Course Objectives

After having successfully completed this course, the trainee will be able to:

- Define the responsibilities of air traffic control for transferring the arriving and departing traffic and apply speed control.
- Apply standard phraseology for departing/ arriving aircraft and fill the strip (departure\arrival) as required.
- Identify and apply the appropriate separation minima and criteria.
- Apply the concepts of transition altitude, transition level, QNH and QFE to altimetry problems.
- Apply appropriate approach control procedures.
- Identify the coordination required and specify the form the coordination should take.
- Respond to emergency and abnormal situations.

Course (055)
Non-Radar Area Control

no	Subject
1	Introduction of procedural Area Control
2	Navigation Aids
3	AIRCRAFT PERFORMANCE
4	Strip Marking& Board Management
5	SEPARATION
6	emergency
7	human factor
8	meteorology

Course Objectives

To train students in accordance with Jordanian Civil Aviation regulations and (ICAO) standards and recommended practices to handle national and international flights overflying within Amman Flight information region (FIR)

Course (054)

Approach Radar Control

no	Subject
1	Radar Theory
2	Radar Equipment
3	General Radar Procedures
4	Radar Separation
5	Radar Vectoring
6	Radar Coordination
7	ACAS
8	Emergencies and Unusual Situations

Course Objectives

Given lectures and practical training in an approach control simulator, trainee will have sufficient knowledge of Approach Control to meet the standards prescribed in ICAO Annex 1



Course (054A)

Area Radar Control

no	Subject
1	Radar Theory
2	Radar Equipment
3	General Radar Procedures
4	Radar Identification
5	Radar Separation
6	Radar Vectoring
7	Radar Coordination
8	ACAS
9	Emergencies and Unusual Situations

Course Objectives

Explain principles of operation of primary and secondary surveillance radar (SSR) systems.

- Vector aircraft within en-route or area radar sector.
- Monitor known air traffic to provide aircraft concerned with information or advice relative to any significant deviations from their ATC clearances.
- Take appropriate action in the event of diversion aircraft, radio communication failure, radar equipment failure and/or emergency aircraft.



Part II: Aeronautical Information Services

Course (021)

Aeronautical Information Services

no	Subject
1	Cartography Course
2	Aeronautical Chart
3	Ais General
4	Notam
5	Publication
6	Briefing
7	Open Book I
8	Open Book Ii

Course Objectives

To train participant to carry out the functions and duties of aeronautical information service to ensure the flow of information necessary for the safety, regularity and efficiency of international air navigation.



Course (029)
Aeronautical information specialist

no	Subject
1	Wgs-84
2	Cns/Atm
3	Navigation
4	
5	New FPL
6	Notam
7	Atm

PART III Air transport courses

Course (069)

Basic air transport

no	Subject
1	Air transport principles
2	Air traffic services (annex 11)
3	Universal organizations (ICAO)
4	Facilitation (annex 9)
5	Introduction to air law
6	Mai rules of Chicago convention 1944
7	Rules of the air (annex 2)

Course (061)

Air transport statistics

no	Subject
1	Statistics and its application in air transport
2	ICAO reporting forms
3	Cost-benefit analysis to Statistics
4	International negotiation services
5	Statistics regulation
6	Introduction to air transport

Course (069A)

Air transport specialist

no	Subject
1	Air transport rules
2	Public international law conventions
3	Ticketing reservation on FARES
4	Private international law convention
5	Air transport economic system
6	Air transport bilateral agreement's
7	ICAO statistics regulation
8	Facilitation

Communication Course

Theory of Satellite

*** Introduction**

1- Basic Principles of Satellite.

- * Historical Overview of Communication Satellites.**
- * Communication with Mobile Earth Stations.**
- * Satellite System.**
- * Radio Regulations and Frequency Bands.**
- * Satellite Orbits.**
- * Space Segment.**
- * Ground Segment.**

2- Satellite Link Budgets:

- * Single Link Consists.**
- * Basic Transmission Principles**
- * Down - Link Budgets.**
- * Up - Link Budgets.**
- * Satellite Path.**

3- Earth Station Engineering.

- * Earth Station.**
- * Antenna Systems.**
- * Transmitting System.**
- * Power Distribution System.**
- * Modulation – De - Modulation.**
- * Control and Monitor Equipment.**

4- Modulation and Multiplexing Techniques.

- * Multiplexing Process.**
- * Base Band Voice Signals.**
- * Analog “Fm - Scpc “Systems.**
- * Transmission Frequency.**
- * Satellite Ranging and Position Location System.**

5- Satellite Antenna and Propagation:

- * Satellite Antenna.**
- * Earth Station Antenna.**
- * Axisymmetric Antenna and the Advantages.**
- * Antenna Tracking Considerations.**
- * Future Trends in Earth Station Antenna Design.**

6- Propagation and Interference:

- * Propagation.**
- * Radio Noise.**
- * Ionosphere Effects.**
- * Tropospheric Effects.**

- * **Depolarization.**
- * **Interference Considerations.**
- * **Interference with Terrestrial Networks.**

CNS / ATM

- Introduction to CNS / Atm:

- * **Back Ground.**
- * **Short Comings of Conventional Systems.**
- * **Current Navigation Capability.**
- * **A Brief Look at CNS / Atm.**
- * **Global Planning and Regional Planning Process.**
- * **ICAO Policies on CNS / Atm.**

- Cns System -- Communication:

- * **Introduction.**
- * **Telecommunications in ATC.**
- * **Essential tools for controller**
 - **Radar display**
 - **Radio**
 - **Telephone**
- * **AIR – Ground Communication:**
- * **ATC Communications**

- * **Operational Requirements**
- * **HF – Voice Communication**
- * **VHF – Voice Communication**
- * **UHF – Voice Communication**
- * **Satellite Voice Communication**
- * **Data Communication to Replace Voice Communication.**
- * **Ground / Ground Voice Communications:**
- * **Types of links (Radio, Telephone)**
- * **Availability**
- * **Signaling.**
- * **Ground / Ground Data Communications**
- * **Used for many purpose.**
- * **Flight data transmission**
- * **AFTN, OLDI.**
- * **ATFM.**
- * **AIS.**
- * **Communication emerging Technologies:**
- * **Data – Link needed by ATC.**
- * **Data – Link needed by Airlines.**
- * **ICAO initiative for Telecommunications**
- * **The Connected mode.**
- * **A cars Data – Link.**
- * **AMSS**
- * **VHF Digital link (VDL Mode 2)**

- * **The GNSS Concept.**
- * **Operational Requirements for Navigation**
- * **GPS – How it works?**
- * **Satellite Ranging**
- * **Measuring Distance from a satellite**
- * **Perfect timing**
- * **Effects of Atmosphere and Ionosphere.**
- * **Differential GPS.**
- * **GPS Benefits.**
- * **Status of GLONASS**
- * **SBAS**
- * **GBAS**
- * **New GNSS elements and future trends.**
- * **EGNOS architecture**
- * **EGNOS Planning**
- * **GALILEO – Services**
- * **GALILEO – Planning**
- * **G. R. A. S.**
- * **A/C multi – mode Receiver.**
- * **WAAS**
- * **LAAS**
- * **On Board Increments (RAIM, AAIM Function)**
- * **Users Receivers**
- * **RVSM.**

3- RNP Criteria:

- * **Defining RNP Air Space.**
- * **Applying RNP in an Air Space.**
- * **Relation of R N P to Separation Minima.**
- * **Rnp Types : (1, 4 , 12 . 6 , 20) .**
- * **Air Space Requirements.**
- * **RNP Route:**
 - * **Fixed R N P Route.**
 - * **Contingency R N P Route.**
 - * **Random R N P Route.**
- * **RNP Co - Ordinate System.**
- * **Atc Procedures in R N P Air Space:**
 - * **Normal Procedures.**
 - * **Special Procedures.**
 - * **Procedures for Transit between Different Types of R N P Air Space.**
 - * **Rnp Concept for Approach, Landing and Departure Operations.**
- * **RNP Operations:**
 - * **Atc for RNP Air Space.**
 - * **Atc For Parallel Offset.**
 - * **Flight Plan Requirement.**
 - * **Procedures in Event of Equipment Failure.**