

Land, Agriculture and Food Sciences

Air Navigation Services & Navigation

Prepared as a professional course profile for delegate review, sponsorship approval and organisational training planning.

COURSE CODE

MSD2812

DELIVERY

Online / Face-to-Face

DURATION

Flexible

PREPARED FOR

Organisation Approval

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Course Overview

The Air Navigation Services & Navigation course by Magna Skills offers a comprehensive exploration of air navigation systems, services, and techniques crucial for safe and efficient air travel. This course covers essential topics such as air traffic control procedures, navigation aids, airspace management, and the latest advancements in navigation technology, providing participants with the knowledge and skills necessary for successful navigation in aviation.

Course Outcomes

- **Understanding Air Navigation Systems:** Gain a comprehensive understanding of air navigation systems, including the principles of radar, satellite navigation, and communication systems used in aviation.
- **Air Traffic Control Procedures:** Learn about air traffic control (ATC) procedures, including clearance delivery, ground control, tower control, and en-route control, to ensure safe and efficient air traffic management.
- **Navigation Aids and Instruments:** Explore different types of navigation aids and instruments, such as VOR (VHF omnidirectional range), NDB (non-directional beacon), GPS (global positioning system), and inertial navigation systems, to navigate aircraft accurately.
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Airspace Management: Understand the principles of airspace management, including classification of airspace, air traffic flow management (ATFM), and coordination with air traffic control authorities.

- **Navigation Technology and Innovations:** Stay updated on the latest advancements in navigation technology, such as RNAV (area navigation), RNP (required navigation performance), and ADS-B (automatic dependent surveillance-broadcast), to enhance navigation efficiency and safety.

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Course Outline / Curriculum

Module 1: Introduction to Air Navigation

- Overview of air navigation principles and systems
- Historical development of air navigation technologies

Module 2: Air Traffic Control Procedures

- Roles and responsibilities of air traffic controllers
- ATC clearances and communications procedures

Module 3: Navigation Aids and Instruments

- Principles of VOR, NDB, and GPS navigation
- Instrument flight rules (IFR) navigation techniques

Module 4: Radar and Surveillance Systems

- Basics of radar operation and surveillance
- Secondary surveillance radar (SSR) and ADS-B technology

Module 5: Airspace Management and Classification

- Classification of airspace (e.g., controlled, uncontrolled)
- Air traffic flow management (ATFM) and capacity planning

Module 6: RNAV and RNP Navigation

- Concepts and applications of RNAV and RNP
- Performance-based navigation (PBN) requirements

Module 7: Communication and Navigation Procedures

- Standard phraseology and communication protocols
- Navigation procedures for departure, en-route, and arrival

Module 8: Navigation Safety and Risk Management

- Risk assessment and mitigation in air navigation
- Safety management systems (SMS) in aviation

Module 9: Emerging Navigation Technologies

- Next-generation navigation technologies and trends
- Integration of unmanned aerial vehicles (UAVs) in air navigation

Module 10: Case Studies and Practical Applications

- Analysis of real-world navigation scenarios
- Simulation exercises and practical navigation challenges

The Air Navigation Services & Navigation course provides participants with the knowledge and skills necessary to navigate aircraft safely and efficiently in the aviation industry. Through a blend of theoretical learning, practical exercises, case studies, and interactive discussions, participants will gain a deep understanding of air navigation systems, procedures, and technologies, empowering them to contribute effectively to the field of aviation navigation.

Target Audience

- Executive and senior managers in Air Navigation Service Providers
- Air Traffic Controller Officers (ATCO), operational staff, and supervisors
- Members of the Boards of Directors of Air Navigation Service Providers

Key Course Benefits

Work-Ready Skills

Delegates leave with practical tools, templates and methods they can apply immediately at work.

Better Institutional Results

The programme supports stronger planning, reporting, compliance, accountability and service delivery.

Sponsor-Friendly

This document is designed to help supervisors, HR units and sponsors approve delegate participation quickly.

Professional Recognition

Delegates receive training documentation and a certificate of completion after successful participation.

Our Training Centres & Delivery Options

Magna Skills offers flexible delivery through face-to-face training centres across Africa and beyond, plus Online / E-Learning for delegates who prefer remote participation.

Southern Africa

Practical training destinations with strong travel access and delegate support.

Pretoria, South Africa

Vic Falls, Zimbabwe

Livingstone, Zambia

East Africa

Popular regional centres for government, NGO and donor-funded project teams.

Kigali, Rwanda

Kampala, Uganda

Nairobi,

Zanzibar, Tanzania

West Africa & Islands

Strategic locations for regional networking and executive capacity building.

Accra, Ghana

Port Louis, Mauritius

International Executive Venue

Premium destination training for senior teams and international delegates.

Dubai, United Arab Emirates

Online / E-Learning

Attend from anywhere through live online, blended or self-paced learning options.

Online, E-Learning

Remote Teams

Flex

Organisation-Based Training

Magna Skills can also arrange dedicated in-house training for ministries, NGOs and companies.

Onsite

Custom Dates

Group Training

Ready to Nominate Delegates?

Use the links below to register, review the live course page or contact Magna Skills for organisation-based training support.

[Register / Apply Online](#)

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About Magna Skills

Magna Skills Development Institute provides practical capacity building programmes for government departments, NGOs, public institutions, donor-funded projects and private sector professionals across Africa. Our training approach combines expert facilitation, real workplace case studies, practical tools, post-training support and professional documentation that helps organisations strengthen staff performance and service delivery.

Government Training

NGO Capacity Building

Corporate Workshops

Online Learning

Face-to-Face Training

Certifica

Approval & Authorisation Form

This section may be completed by the organisation, department, HR office, finance office or sponsor approving delegate participation. It can be attached to an internal memo, procurement request or training approval submission.

Organisation / Department	
Delegate Name(s)	
Approved Course	Air Navigation Services & Navigation
Preferred Delivery Mode	<input type="checkbox"/> Online <input type="checkbox"/> Face-to-Face <input type="checkbox"/> Organisation-Based Training
Preferred Training Venue / Date	
Estimated Number of Delegates	
Budget / Vote Number	
Contact Person	
Email / Mobile	

Authorised Name

Signature / Stamp

Date