YOUR DREAM. OUR MISSION.

At CIPTA, we are dedicated to building the next generation of skilled and confident pilots. With expert guidance, DGCA-oriented training and a focus on excellence, we help you turn your aviation dreams into reality.

OUR COURSES & SERVICES

DGCA GROUND CLASSES
All subjects covered as per DGCA syllabus by experienced faculty.

CPL TRAINING GUIDANCE
Complete guidance for Commercial Pilot Licence (CPL) path.

AIRLINE PREPARATION
Interview preparation, psychometric tests and grooming for airline selection.

AVIATION CAREER COUNSELLING
Personalized counselling to help you choose the right aviation career path.

EXPERT FACULTY
Learn from experienced aviation professionals and industry experts.

WHY CHOOSE CIPTA?

- Experienced Aviation Professionals
- DGCA-Oriented Training
- Personalized Student Support
- Modern Learning Environment
- Career-Focused Approach

CENTRAL INDIA PILOT TRAINING ACADEMY

CIPTA

CENTRAL INDIA PILOT TRAINING ACADEMY

RAIPUR, CHHATTISGARH

YOUR JOURNEY TO THE COCKPIT STARTS HERE

PROFESSIONAL TRAINING | DGCA GROUND CLASSES | CPL TRAINING GUIDANCE | YOUR DREAM OUR MISSION

LIFT OFF TO EXCELLENCE

WELCOME TO CIPTA

Central India Pilot Training Academy (CIPTA) is dedicated to shaping the next generation of aviation professionals through expert guidance, quality training, and a commitment to excellence. We provide the right platform, knowledge, and support to help you achieve your dream of becoming a professional pilot.

FLIGHT TRAINING INDIA AND ABROAD

ABROAD DESTINATIONS

USA | SOUTH AFRICA | NEW ZEALAND

CONTACT US

9834438885

70003 08858

info@centralindiapilottrainingacademy.com

www.centralindiapilottrainingacademy.com

AIR REGULATIONS

RULES • SAFETY • RESPONSIBILITY

Air Regulations provide the framework of rules and standards that ensure safe, orderly and efficient aviation operations.

WHAT IS AIR REGULATIONS?

Air Regulations is the study of the rules, procedures and legal requirements governing civil aviation. It helps pilots understand their responsibilities and operate the aircraft in accordance with national and international laws.

SOURCES OF AIR REGULATIONS

INTERNATIONAL
ICAO Annexes, Standards and Recommended Practices (SARPs)

NATIONAL
Civil Aviation Requirements (CAR), DGCA Rules, Orders and Circulars

OPERATIONAL
AIP, Aircraft Flight Manual, ATC Procedures, Airline Operations Manual

SCOPE OF AIR REGULATIONS

SAFETY
Ensures safety of aircraft, crew, passengers and others.

ORDERLY OPERATIONS
Ensures orderly and efficient flow of air traffic.

LEGAL COMPLIANCE
Defines legal obligations and pilot responsibilities.

STANDARDIZATION
Maintains uniformity in procedures and practices worldwide.

INTERNATIONAL COOPERATION
Promotes cooperation and understanding among nations.

ICAO
International Civil Aviation Organization

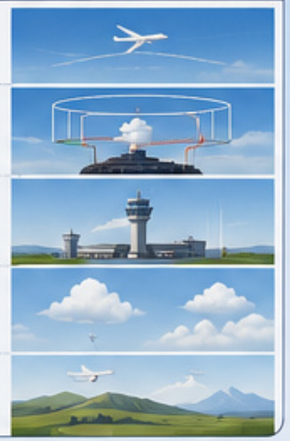
DGCA
Directorate General of Civil Aviation (India)

CAR
Civil Aviation Requirements

> “Compliance with regulations is the foundation of aviation safety.”

AIRSPACE CLASSIFICATION

CLASS A	18,000 ft and above IFR operations only
CLASS C	Controlled airspace IFR & VFR ATC clearance required
CLASS D	Controlled airspace VFR operations ATC clearance required
CLASS E	Controlled airspace VFR & IFR Traffic information service
CLASS G	Uncontrolled airspace VFR operations



RULES OF THE AIR (RIGHT OF WAY)

CONVERGING
When two aircraft are converging, the aircraft on the right has right of way.

OVERTAKING
An aircraft overtaking another has right of way.

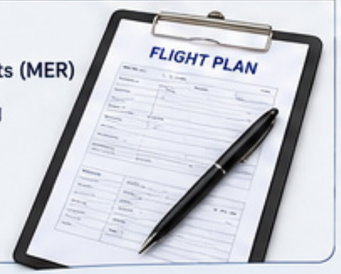
HEAD-ON
When two aircraft are flying head-on, both shall turn right.

TAKE-OFF
An aircraft taking off has right of way over one landing.

LANDING
An aircraft landing has right of way over one taking off.

FLIGHT OPERATIONS REGULATIONS

- Flight Planning and Flight Plan
- Minimum Equipment Requirements (MER)
- Crew Requirements and Licensing
- Flight Time Limitations (FTL)
- Passenger and Cargo Rules
- Dangerous Goods Regulations



AIR TRAFFIC SERVICES (ATS)

AIR TRAFFIC CONTROL (ATC)
Provides separation between aircraft and traffic flow management.

FLIGHT INFORMATION SERVICE (FIS)
Provides information and advice useful for safe and efficient flight.

ALERTING SERVICE
Provides assistance in search and rescue of aircraft in distress.

- Pilot Licenses (PPL, CPL, ATPL)
- Medical Certificates
- Ratings and Endorsements
- Aircraft Certification
- Airworthiness Requirements

AVIATION SAFETY & COMPLIANCE

- Regulations promote a strong safety culture.
- Non-compliance can lead to legal action and jeopardize safety.
- Every pilot must know, understand and follow the regulations.

KEY TAKEAWAY

- Air Regulations ensure safe, orderly and efficient aviation.
- Pilots must be familiar with applicable rules and procedures.
- Knowledge of regulations builds professionalism and responsibility.
- Safety always comes first, every flight, every time.

REMEMBER

A good pilot is not just a skilled pilot, but also a knowledgeable and responsible professional who respects and follows the rules of the sky.

“KNOW THE RULES | FOLLOW THE RULES | FLY SAFELY”

TECHNICAL SPECIFIC

IN-DEPTH STUDY OF AIRCRAFT SYSTEMS, PERFORMANCE & PROCEDURES

KNOW YOUR AIRCRAFT. FLY SAFE. FLY PROFESSIONAL.

WHAT IS TECHNICAL SPECIFIC?

Technical Specific is an advanced aviation subject that provides in-depth knowledge of a particular aircraft type and its systems.

It includes aircraft performance, limitations, normal and abnormal procedures, system operation and emergency procedures.

It helps pilots understand how each system works and how to manage situations safely and efficiently.

KEY AREAS OF STUDY

- Aircraft General & Technical
- Aircraft Systems & Components
- Normal Procedures
- Abnormal & Emergency Procedures
- Performance & Limitations
- Weight & Balance
- MEL, CDL & Maintenance Concepts
- Operating Manuals & Documents

AIRCRAFT SYSTEMS

POWERPLANT
Study of engine construction, operation, controls and indications.

AVIONICS
Navigation, communication, automation, displays and flight management.

FLIGHT CONTROLS
Control surfaces, control systems, trims and autopilot.

FUEL SYSTEM
Fuel storage, transfer, management, distribution and jettisoning.

LANDING GEAR
System operation, safety features, extension / retraction.

ELECTRICAL SYSTEM
Generators, batteries, buses, power distribution and protection.

AIR CONDITIONING & PRESSURIZATION
Cabin pressurization, temperature control and ventilation.

HYDRAULIC SYSTEM
Hydraulic power generation, actuators, valves, and system operation.

FIRE PROTECTION
Fire detection, warning and extinguishing systems.

LEARN TO MASTER

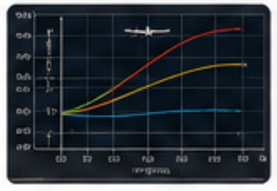
- Aircraft Systems Understanding
- Operating Procedures
- Performance Calculation
- Limitations & Placards
- Abnormal Situations Handling
- Emergency Procedures
- Safety & Standard Compliance

DOCUMENTS & REFERENCES

- Aircraft Flight Manual (AFM)
- Aircraft Maintenance Manual (AMM)
- Quick Reference Handbook (QRH)
- FCOM / QRH / MEL / CDL
- Service Bulletins & Circulars

WHAT YOU WILL LEARN

AIRCRAFT PERFORMANCE



Take-off, Climb, Cruise, Descent, Landing Performance and Limitations.

WEIGHT & BALANCE

Weight calculation, CG limits and Balance for safe operations.

NORMAL PROCEDURES

Standard operating procedures for all phases of flight.

ABNORMAL PROCEDURES

Identify failures, apply correct actions and follow checklists.

EMERGENCY PROCEDURES

Emergency checklists, emergency equipment and crew coordination.

COCKPIT & SYSTEMS

Indicators, warnings, system displays and their interpretation.

REAL AIRCRAFT STUDY

Practical understanding through aircraft walk-around and system familiarization.

BENEFITS

- Strong Aircraft Knowledge
- Better Decision Making
- Safe & Efficient Operations
- Exam Success
- Professional Pilot Growth

AT CENTRAL INDIA PILCT TRAINING ACADEMY (CIPTA), OUR DGCA-FOCUSED TECHNICAL SPECIFIC TRAINING PREPARES YOU FOR EXAMINATIONS AND REAL-WORLD FLIGHT OPERATIONS.

CIPTA
CENTRAL INDIA PILOT TRAINING ACADEMY

RTR (A)

RADIO TELEPHONY RESTRICTED (AERONAUTICAL)

Effective Communication • Safety • Standard Phraseology

RTR(A) enables pilots to communicate clearly and professionally with Air Traffic Control (ATC) using standard phraseology for safe and efficient flight operations.

1. ABOUT RTR (A)

RTR(A) is a qualification that allows pilots to communicate with Air Traffic Services using radio equipment in the aeronautical mobile service.

- Required for Commercial Pilot Licence (CPL)
- Conducted by Wireless Planning & Coordination (WPC), Government of India
- Valid for 6 years

2. IMPORTANCE

- Ensures clear and effective communication with ATC
- Helps in safe navigation and separation
- Essential for both routine and emergency situations
- Builds confidence and professionalism in cockpit

3. SUBJECT COVERAGE

Aviation English
Plain language, clarity, pronunciation, and standard phraseology.

ATC Procedures
Clearances, instructions, readbacks, and position reporting.

Communications
Use of radio equipment, frequencies, and radio telephony procedures.

Emergency Communications
Distress, urgency, and safety messages (MAYDAY, PAN PAN, SECURITE).

Navigation Related Transmissions
Route clearances, holding, approaches, and aerodrome procedures.

4. STANDARD ICAO PHRASEOLOGY – EXAMPLES

SITUATION	EXAMPLE	PILOT RESPONSE
CONTACT	"VT-ABC, CONTACT Mumbai Approach 119.1."	"Over to Mumbai Approach 119.1, VT-ABC."
CLEARANCE	"VT-ABC, CLEARED TO DELHI VIA DCT AGRA, FLIGHT LEVEL 180."	"CLEARED TO DELHI VIA DCT AGRA, FLIGHT LEVEL 180, VT-ABC."
POSITION REPORT	"VT-ABC, REPORT POSITION ABEAM NAGPUR."	"WILCO, WE WILL REPORT ABEAM NAGPUR, VT-ABC."
DESCENT	"VT-ABC, DESCEND FLIGHT LEVEL 120."	"DESCEND FLIGHT LEVEL 120, VT-ABC."
LANDING CLEARANCE	"VT-ABC, CLEARED TO LAND RUNWAY 27."	"CLEARED TO LAND RUNWAY 27, VT-ABC."

Always read back all clearances correctly and completely.

5. RADIO COMMUNICATION RULES

LISTEN
Listen carefully to the full transmission.

THINK
Understand the message and its meaning.

SPEAK
Transmit clearly, concisely and correctly.

CONFIRM
Read back all instructions and clearances.

AVOID UNNECESSARY TALK
Keep the frequency clear for important communications.

6. RADIO COMMUNICATION PROCEDURE

1. **TUNE IN** – Set the correct frequency.
2. **LISTEN** – Listen to ensure frequency is clear.
3. **TRANSMIT** – Make the call using correct phraseology.
4. **RECEIVE** – Listen and understand.
5. **READ BACK** – Read back the message or clearance.

7. EMERGENCY COMMUNICATIONS

MAYDAY	Used for life-threatening emergency. **"MAYDAY MAYDAY MAYDAY"**
PAN PAN	Used for urgency situations. **"PAN PAN PAN"**
SECURITE	Used for safety information. **"SECURITE"**

8. KEY POINTS FOR SUCCESS

- Use standard ICAO phraseology at all times.
- Speak clearly, at a moderate pace and correct volume.
- Read back all clearances accurately.
- Avoid hesitation words like "um", "er", "you know".
- Practice regularly and build confidence.

CLEAR COMMUNICATION • CORRECT PHRASEOLOGY • SAFE OPERATIONS

AIR NAVIGATION

THE ART AND SCIENCE OF FINDING YOUR WAY IN THE SKY

1. INSTRUMENT NAVIGATION

Use of instruments to determine the aircraft position, track, and maintain the desired course.

BASIC FLIGHT INSTRUMENTS

AIRSPEED INDICATOR | ATTITUDE INDICATOR | ALTIMETER | TURN COORDINATOR | HEADING INDICATOR

VERTICAL SPEED INDICATOR | DIRECTIONAL GYRO | HSI / RMI | GPS DISPLAY

INSTRUMENTS USED IN NAVIGATION

VOR INDICATOR | ADF INDICATOR | DME INDICATOR | OBSERVING SYSTEM (OBS)

USE IN NAVIGATION

- Determines the aircraft position using instruments.
- Helps in maintaining the desired track and altitude in all weather conditions.
- Enables precision and safe navigation.

2. GENERAL NAVIGATION

Use of charts, calculations and visual references to find the position and plan the route.

NAVIGATION ELEMENTS

LATITUDE & LONGITUDE | DIRECTION & BEARING | DISTANCE | TIME | WIND & ITS EFFECTS | FUEL PLANNING

AERONAUTICAL CHARTS

ENROUTE CHART | VFR SECTIONAL CHART | APPROACH CHART | TAKE-OFF MINIMA

FLIGHT PLAN

INTERNATIONAL FLIGHT PLAN

7 Aircraft Identification	7 Flight Rules (Type of Flight)		8 Flight Plan Type		9 Number			
	O V F R	N V F R	S	N				

15 Departure Aerodrome	15 Cruising Speed	Level	Route	16 Destination Aerodrome	Total EET	Alt Adts	2nd Altn Aerodrome	Total Fuel

BASIC NAVIGATION CALCULATIONS

DISTANCE	TIME	SPEED	FUEL
D = S × T	T = D / S	S = D / T	F = FFR × TIME
Speed × Time	Distance / Speed	Distance / Time	Fuel Flow × Time
Example: 120 KTS × 2 HR = 240 NM	Example: 240 NM / 120 KTS = 2 HR	Example: 240 NM / 2 HR = 120 KTS	Example: 100 LPH × 2 HR = 200 LTR

3. RADIO NAVIGATION

Use of radio signals and electronic aids to determine the aircraft position.

RADIO NAVIGATION AIDS

VOR	NDB	DME	ADF	ILS
VHF Omnidirectional Range	Non Directional Beacon	Distance Measuring Equipment	Automatic Direction Finder	Instrument Landing System

RADIO NAVIGATION EQUIPMENT

VOR RECEIVER | ADF INDICATOR | DME DISPLAY | VHF TRANSCEIVER | GPS / GNSS

USES

- Provides position, direction, distance and guidance.
- Useful in all weather and long range navigation.
- Essential for route navigation and instrument approaches.

GOOD NAVIGATION = SAFE FLIGHT

ACCURATE POSITION | EFFICIENT ROUTE | FUEL SAVING | SAFETY | ON TIME ARRIVAL

AVIATION METEOROLOGY

UNDERSTANDING WEATHER – ENSURING SAFE FLIGHTS

Observe — Understand — Evaluate — Decide — Fly Safe

ATMOSPHERE

The atmosphere is the blanket of gases surrounding the Earth which supports life and influences all weather phenomena.

- EXOSPHERE (>700 km)
- THERMOSPHERE (80 – 700 km)
- MESOSPHERE (50 – 80 km)
- STRATOSPHERE (12 – 50 km)
- TROPOSPHERE (0 – 12 km)

WINDS

Winds are caused by the movement of air from High Pressure to Low Pressure areas.

H — HIGH PRESSURE → LOW PRESSURE L

TYPES OF WINDS

SURFACE WIND	CROSSWIND	HEADWIND	TAILWIND

PRESSURE SYSTEMS

HIGH PRESSURE (ANTICYCLONE)	LOW PRESSURE (CYCLONE)
H	L

CLOUDS (Types)

CIRRUS	CUMULUS	STRATUS	CUMULONIMBUS	ALTOSTRATUS	NIMBOSTRATUS
High, thin, wispy ice crystals	Fair weather fluffy clouds	Low, gray layered clouds	Towering clouds with heavy rain, thunderstorms	Gray or blue-gray sheet-like clouds	Thick, dark clouds with steady rain

WEATHER PHENOMENA AFFECTING AVIATION

FOG	MIST	THUNDERSTORM	RAIN	DRIZZLE	SNOW	TURBULENCE	ICING	HAZE	MICROBURST
Suspension of tiny water droplets near the ground reducing visibility.	Shallow fog with visibility more than 1 km.	Thunder, lightning, heavy rain, strong winds, hail possible.	Water droplets falling from clouds, reduces visibility.	Light rain with small droplets, reduces visibility slightly.	Ice crystals falling, can accumulate on surfaces.	Irregular air movements causing aircraft to shake or bump.	Ice accumulation on aircraft surfaces, dangerous for flight.	Tiny dry particles in the air reducing clarity and visibility.	Sudden strong downwash followed by outward winds.

ATMOSPHERIC STABILITY

STABLE AIR	UNSTABLE AIR
Suppresses vertical movement, smooth air.	Enhances vertical movement, turbulent air.

FRONTS

Boundary between two different air masses.

COLD FRONT	WARM FRONT	STATIONARY FRONT	OCCLUDED FRONT
Cold air replaces warm air.	Warm air replaces cold air.	Warm and cold air masses meet.	Cold front overtakes warm front.

TYPES OF PRECIPITATION

DRIZZLE	RAIN	SHOWERS	SNOW	HAIL	FREEZING RAIN
Light, fine drops	Larger drops of water	Short, heavy bursts	Ice crystals falling	Ice pellets or hailstones	Liquid freezes on contact

OTHER WEATHER PHENOMENA

DUST STORM	SAND STORM	VOLCANIC ASH	SUN DOG	LIGHTNING

WEATHER INFORMATION & CHARTS

METAR	TAF	SIGMET	WEATHER CHARTS
Aviation routine weather report	Terminal aerodrome forecast	Information on significant weather	Surface & upper air charts for planning

OTHER WEATHER PHENOMENA (Advanced)

- Low Level Wind Shear
- Clear Air Turbulence (CAT)
- Wake Turbulence
- Tropical Cyclones
- Jet Stream
- Solar Radiation
- Temperature Inversions

EFFECTS ON FLIGHT OPERATIONS

- Affects visibility and runway operations
- Affects aircraft performance
- May cause turbulence and discomfort
- Can cause icing and
- May lead to delays or route changes

KEY FOR PILOT

- Understand weather continuously
- Use correct sources and update information
- Plan flight according to weather conditions
- Avoid hazardous weather
- Ensure safety of passengers and aircraft

GOOD WEATHER KNOWLEDGE = SAFE FLIGHT

LEARN • ANALYZE • PLAN • FLY SAFE