



Helping you to get your wings

ZUHES AVIATION

2023 - 2024 ::::



ABOUT US

At Zuhes Aviation, we ensure that you not only clear your exams, but also ensure that a flying based approach is used, when you are under training. This will enable you to co-relate, what you read in theory to what you will be doing in an actual aircraft.

Our extended library will help you clear your DGCA, SACAA exams with ease. resources include, Aeroversity, Aviation Exam, Pooley etc.

Our Extensive question bank containing 5000+ questions will ensure adequate practice and mock exams before you appear for the Exams.

SUBJECTS

DGCA:

- Air Law (Regulations)
- Aviation Meteorology
- Air Navigation
- Aircraft Technical - General

SACAA

- Air Law
- Meteorology
- General Navigation
- Instrument Navigation
- Radio Navigation
- Human Performance
- Flight Planning and Performance
- Aircraft Technical - General
- Instrument Rating
- General Radio
- Night Rating.

All study material, will be provided to the students on enrollment. When choosing to fly in South Africa, students can be trained for SACAA papers too.



Flying in South Africa

With lots of designated general flying areas, and open skies (Uncontrolled), South Africa is the choice, that must be considered when choosing to fly out of India. It is fast, robust, and cost effective.

The SACAA, is committed to, continued support to students, enrolling in their country for CPL, through Part 141. With the right flying club, and a good instructor, finishing your South African CPL is a breeze away.

Commercial Pilot License Requirements

Educational Requirements: 10 +2 (with physics and mathematics)

Exams: Clear 5 Indian DGCA Exams if planning to fly in India, or 3 papers when flying overseas. Exams are conducted every month by DGCA.

Medical fitness: Must Possess a Valid Class I medical fitness certificate.

Flying:

- 200 hrs in Total,
- Of which 100 hrs as Pilot-in-command (Solo).
- If multi engine required, 10 hrs of Multi (DGCA requirement) or 15 hrs of Multi (Airbus requirement), can be a part of your 200 hrs.
- If Instrument Rating required 40 hrs of IF required, of which 20 hrs maximum can be on a approved simulator.
- A 300 nautical mile flight with 2 full stop landings, apart from the aerodrome of departure.
- 50 Hrs of cross country flights as PIC

Other requirements: RTR and FRTOL.



Regulations

Week 1

- Day 1** International Conventions, C of A, C of R
- Day 2** Rules of Air - I
- Day 3** Rules of Air - II
- Day 4** PANS Ops - I
- Day 5** Pans Ops - II

Week 2

- Day 1** Exam on Prev week subject, Discussion on Exam Quest
- Day 2** Air Traffic Services
- Day 3** Area Control Service
- Day 4** Approach Control Service
- Day 5** Aerodrome Control Service

Week 3

- Day 1** Exam on Prev week subject, Discussion on Exam Quest
- Day 2** Lighting Systems
- Day 3** Customs and Facilitation, Search and Rescue
- Day 4** Accidents and Incidents, Unlawful interference
- Day 5** Communication

Week 4

- Day 1** Exam on Prev week subject, Discussion on Exam Quest
- Day 2** Human Performance - I
- Day 3** Human Performance - II
- Day 4** Indian Laws (Aircraft Rules, Aircraft Act), AIP, AIC
- Day 5** Personnel Licensing.



Regulations

(Cont....)

Week 5

Day 1 Exam on Prev week subject, Discussion on Exam Quest

Day 2 Operational Procedures - I

Day 3 Operational Procedures - II

Day 4 Revision Exam - I

Day 5 Revision Exam - II

Week 6

Day 1 Revision Exam - III

Day 2 Revision Exam - IV

Day 3 Revision Exam - V

Course Notes by For regulation will be sent to you.

Revision Exams will be 50 Questions with duration of 60 mins, to get yourself used to DGCA Exams

Payments in Installments is not applicable

Duration: 6 Weeks (1.5 to 2 Hrs/Day)



Meteorology

Week 1

- Day 1** Introduction of Earth, Atmosphere, ISA, JSA
- Day 2** Atmospheric Pressure, Altimeter, Altimetry
- Day 3** Temperature: C, F and K scale, Di-urnal Variation
- Day 4** Density and Humidity. Relationship btw T, P and D
- Day 5** Exam on the Prev 4 Days session and Discussion.

Week 2

- Day 1** Winds, Pressure Systems, Coriolis, Geostrophic Winds
- Day 2** Clouds, Visibility and Fog
- Day 3** Stable and Unstable Atmosphere. SLR, ELR, DALR
- Day 4** Optical Phenomena, Halo, Rainbow, Elmo's Fire
- Day 5** Rain and Precipitation and Thunderstorms

Week 3

- Day 1** Exam on Previous week topics and discussion
- Day 2** Fronts: Warm, Cold and Occluded. Air Masses
- Day 3** Clear Air Turbulence, Jet Streams
- Day 4** Mountain Waves, General Circulation
- Day 5** Exam on last three days topics and Discussion.

Week 4

- Day 1** Indian Climatology
- Day 2** Exam on Indian Climatology
- Day 3** Weather Reports, METAR, TAF, SIGMET, Station Charts
- Day 4** Intro in Weather Radar
- Day 5** Exam on Weather Reports

Meteorology

(Cont....)

Week 5

- Day 1** Revision Exam I
- Day 2** Revision Exam II
- Day 3** Revision Exam III
- Day 4** Revision Exam IV
- Day 5** Revision Exam V

Course Notes by Zuhes for meteorology will be sent to you.

You will write 5 weekly exams and 5 Revision Exams. In total 10 Examinations. Revision Exams are 50 Questions for 60 mins.

Focus will be given on Indian Climatology and Weather Report decoding as this will be used in day today flying.

Payments in Installments is not applicable

Duration: 5 Weeks (1.5 to 2 Hrs/Day)

AVIATION

Navigation

Week 1 - General Nav

- Day 1** The Earth, Latitude, Longitude, Directions
- Day 2** Circles (Great Circle, Small Circle), Dlong and Dlat
- Day 3** Calculating Dlong and Dlat (Various Problems)
- Day 4** Exam on Dlong and Dlat. and Discussion
- Day 5** Departure and Problems on Departure

Week 2 - General Nav

- Day 1** Exam on Departure and Discussion
- Day 2** GCT, RLT, Convergency and Conversion Angle
- Day 3** Problems on Convergency
- Day 4** Exam on Convergency and Conversion Angle
- Day 5** Earth Magnetism, True vs Magnetic vs Compass Direction

Week 3 - General Nav

- Day 1** Solar System, Kepler's Law, Position of Sun
- Day 2** Time: LMT, GMT, ST and DT
- Day 3** Time Calculation incl IDL calculations
- Day 4** Exam on Magnetism, Time and Solar System.
- Day 5** Triangle of Velocities (Air Vector, Ground Vector and Wind Vector)

Week 4 - General Nav

- Day 1** Triangle of Velocities - II
- Day 2** Triangle of Velocities - III
- Day 3** Exam on Triangle of Velocities
- Day 4** Track error (1:60 rule) and Applications.
- Day 5** Revision Exam - I (From the Beginning) & Discussion



Navigation

(Cont....)

Week 5 - General Nav

- Day 1** Scales and Chart Theory
- Day 2** Cylindrical and Mercator Projection Properties
- Day 3** Conical and Lamberts Projection and Properties
- Day 4** Polar Stereographic, Transverse & Oblique Mercator
- Day 5** Exam on Scale and Chart Theory

Week 6 - General Nav

- Day 1** Critical Point (CP) / Equal Time Point (ETP)
- Day 2** Point of No Return (PNR) / Point of safe Return (PSR)
- Day 3** Problems on CP and PNR
- Day 4** Revision Exam - II (General Nav)
- Day 5** Revision Exam - III (General Nav)

Week 7 - Instrument Nav

- Day 1** Atmosphere, Temp measurement (RAT ,TAT ,SAT)
- Day 2** Atmospheric Pressure, Static and Pitot System, Errors
- Day 3** Altimeter construction, Altimetry, QNH, QFE, QNE, QFF
- Day 4** Errors in Altimeter, PA, DA, TA
- Day 5** Vertical Speed Indicator (VSI) Construction and Errors

Week 8 - Instrument Nav

- Day 1** Air Speed Indicator Construction and Errors
- Day 2** Mach, Local Speed of Sound, Mach Meter and Errors
- Day 3** Relationship between RAS, TAS and Mach No.
- Day 4** Exams for Week 7 and 8
- Day 5** Earth and Aircraft Magnetism



Navigation

(Cont....)

Week 9 - Instrument Nav

- Day 1** Compass working and Errors associated with it
- Day 2** Gyroscope - Theory (Rigidity, Precession, Gimbals)
- Day 3** Direction Indicator And Errors
- Day 4** Turn and Slip Indicator and Turn Co-Ordinator
- Day 5** Attitude Indicator / Artificial Horizon

Week 10 - Instrument Nav

- Day 1** Exam on Week 8 to 9
- Day 2** Revision Exam - IV (Instrument Nav)
- Day 3** Revision Exam - V (Instrument Nav)
- Day 4** Air Data Computer, Intro on FMS, RLG, INS and IRS
- Day 5** Revision Exam - VI (Gen and Inst Nav)

Week 11 - Radio Nav

- Day 1** Radio Wave theory, Propagation,
- Day 2** NDB and AFD
- Day 3** Problems with regards to NDB and ADF
- Day 4** VOR Theory, Cone of Confusion, CDI
- Day 5** Radial Interception with VOR

Week 12 - Radio Nav

- Day 1** RMI, HSI
- Day 2** Exam on Week 11
- Day 3** Radar Basics
- Day 4** Ground Radar, Airborne Weather Radar
- Day 5** Secondary Surveillance Radar (SSR)



Navigation

(Cont....)

Week 13 - Radio Nav

- Day 1** Revision VII - (Radio Navigation Complete)
- Day 2** Plotting on Mercator and Lamberts
- Day 3** Revision VIII - (Complete Nav)
- Day 4** Revision IX - (Complete Nav)
- Day 5** Revision X - (Complete Nav)

Course Notes by Zuhes for Navigation will be sent to you one by one. i.e First General Nav, Followed by Instrument Nav and then Radio Nav.

You will write 10 weekly exams and 10 Revision Exams. In total 20 Examinations.

Focus will be given equally on sums and theory as, questions in examination comprises on both.

Payments in 2 Equal Installments can be done. 2nd payment must be done on completion of General Navigation

Books and consecutive chapters will be taken only on the payment of the final installment.

Duration: 13 Weeks (1.5 to 2 Hrs/Day)



SA-CAA

Week 1

- Day 1** Air Law - CAR Part 61
- Day 2** Air Law - CAR Part 12,43
- Day 3** Air Law - CAR Part 67
- Day 4** Air Law - CAR Part 91
- Day 5** Air Law - CAR Part 92, 93, 121, 135,

Week 2

- Day 1** Air Law - Enroute Sections
- Day 2** Air Law - Revision on Indian Air law w.r.t SACAA
- Day 3** General Nav - Plotting Basics
- Day 4** Instruments - EFIS, FD, Autopilot
- Day 5** Instruments - Stall Warning, Powerplant Instruments

Week 3

- Day 1** Meteorology - Local Winds
- Day 2** Meteorology - South African Climatology
- Day 3** Radio Nav - RNAV / GPS
- Day 4** ATG - Fuselage / Windows / Wings / Landing Gears
- Day 5** ATG - Hydraulics

Week 4

- Day 1** ATG - Air Driven Systems (Pneumatic Systems)
- Day 2** ATG - Fuel System
- Day 3** ATG - Piston Engines 1
- Day 4** ATG - Piston Engines 2
- Day 5** ATG - Turbines 1



SA-CAA

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Week 5

- Day 1** ATG - Turbines 2
- Day 2** POF - Subsonic Aerodynamics / Lift
- Day 3** POF - Drag / Types of Drag
- Day 4** POF - Thrust / Flying controls / Effect of Controls
- Day 5** POF - Trim / Control Balancing / Adverse Yaw

Week 6

- Day 1** POF - Lift Augmentation Devices
- Day 2** POF - Stall / Spin / Spital
- Day 3** POF - Stability / S&L / Turns / Climb / Descend
- Day 4** FPL - Graphs and Plotting
- Day 5** FPL - Tables and Correlation

Week 7

- Day 1** FPL - M & B - Floor Loading
- Day 2** FPL - M & B - Shifting of mass
- Day 3** IR Air Law - Recap
- Day 4** IR AWOPS - Recap
- Day 5** IR PANS OPS - Doc 8168



Course Fee Structure

Ground Classes

The fee structure for the ground classes are as follows

- Air Law - INR 40,000
- Meteorology - INR 40,000
- Navigation - INR 60,000
- Aircraft Technical (General) - INR 40,000
- SACAA Papers Breifing - INR 40,000

Flying

The cost of flying in South Africa is dependent or various factors such as

- How soon the student finishes his ground papers.
- How long does the student rakes to finish his dual flying.
- Any extra simulator sessions
- Any extra dual sessions
- The duration of stay in South Africa
- The varying cost of living, considering the inflation.

As an Approximation, the total cost of getting your CPL from South Africa, including Accommodation would be 32,00,000 to 35,00,000 INR (Depending on the above mentioned factors)

The actual quote for the current scenario shall be provided to the student, when he wishes to enroll in our program.

Further, you are informed that, you must fly in India for a certain Hours (Appx 8 Hrs) in India, within a period of 6 months of you finishing your CPL check flight in South Africa. This conversion flying shall cost you a further 2,00,000 INR appx.



How to get in touch?

Feel free to call us or WhatsApp us anytime you have a query. We are available at

 **+91 98848 98437**

We are also active on the Instagram's social media Channel, where you get recent updated on the happening in our company, updates on the aviation industry, and some fun facts. Follow us

 **@zuhesaviation**

If you need to read a blog, or need to share our details to someone, or if you need to log in to your exam corner, after you have enrolled with us, feel free to visit

 **<https://zuhes.com>**

If you feel the need to email us, or if any email is received from us, it will be through

 **info@zuhes.com**

