



Student Pilot Ground School



127 Brisbane Rd Mooloolaba

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SunJet Simulations
Ground Training Tutoring Program
In Cooperation with
The Sunshine Coast Aero Club

Module One: Aerodynamics - Motion Control

Study guide: Part Two –Bob Tait manual

Objective: At the end of this module the student will be familiar with the following:

- Parts of the aircraft and their purpose
- Axis points and what they relate to
- What attitude is and it's relationship to how you fly the plane
- The primary and secondary effects of the flight controls and aileron and rudder coordination
- Effects of speed on aircraft control
- Effect of propeller slipstream
 - Go over questions in exercise A1 (Page 27)

Module Two: Vector Forces and Stalling

Study Guide: Part Three – Bob Tait manual

Objective: At the end this module the student will be familiar with the following:

- Resolving forces – vectors (resulting force) (we will cover reading force vectors and total resultants)
- Understanding lift and how it is created (will cover with the above dot point)
- Relative airflow (will cover with the above)
- Aerofoil (Angle of attack) (will cover with the above)
- Centre of Pressure (will cover with the above)
- Effect of changing speed on angle of attack
- Effect of changing angle of attack (will be covered with lift and drag on the aerofoil)
- Stalling speed- what it is (brief introduction)
 - Go over questions in exercise A2 (Page 40)

Study Guide: Part Three –Bob Tait manual

- Weight
- Centre of gravity
- Drag (types of drag)
- Drag at low airspeed
- Ground Effect
- Drag at high speed
- Lift/Drag ratio
 - Review questions in exercise A3 (page 52)

Module Three: Climbing and Descending

Study Guide: Part five- Bob Tait manual

Objective: At the end of this module the study will be familiar with the following:

- Maximum angle of climb vs Maximum rate of climb
- Wind effect on climb performance
- Effect of turning on climb performance
- Level flight – the effect of weight
- Power off descent
- Effect of power on descent
- Effect of wind on descent
- Effect of weight on descent
- The concept of Power + Attitude = Performance
 - Review questions on Exercise A5 (that apply to above)

Module Four: Tour of the Aero Club

Module Five: Radio Calls

Study Guide: Part One – Bob Tait manual

Objective: At the end of this module the study will be familiar with the following:

- Limitations of VHF transmissions (how VHF works)
- Control Layout on the VHF radio (get a picture of sling radio stack)
- Phonetic Alphabet
- Transmitting numbers (terminology)
- Radio calls in an emergency
 - The distress message
- Radio procedure at Sunshine Coast Airport (class D)
 - Controlled
 - Sunshine Coast Traffic (the traffic mix)

Module Six: Instruments

Study Guide: Desk top simulator and instrument cut out

Objective: At the end of this module the study will be familiar with the following:

- Operation and function of Heading indicator
- Attitude indicator
- Turn co-ordinator
- Airspeed Indicator (colour zones)

- Altimeter
- Magnetic compass
- Vertical Speed indicator
 - Review questions in exercise GK3 (page 179)

MODULE Seven - Aircraft Performance

Study Guide: Part 9- Bob Tait Manual

Objective: At the end of this module the study will be familiar with the following:

- What is meant by performance (TODR given different atmospheric conditions weight, climb rate etc)
- Air density (ISA, QNH, Elevation, pressure drop with height, pressure drop with temp. etc.
- Difference between pressure height and density height
- Terms used for aircraft performance (BEW, ZFW, RAMP weight, TODA, TORA etc.)
- Factors affecting take-off and landing performance (atmospheric density, temp, pressure, elevation, humidity.)

MODULE Eight- Aircraft Performance Continued...

Part 9- Bob Tait Manual

- Performance Charts (Standard and Linear)
- Students Practice performance charts (can we please prepare practice P. Chart problems.)
- Using loading systems (Loading system Charlie. Can we please prepare a supplement for loading system Charlie for students, also i will look into showing them the Sling's Loading System, time permitting)

Module Nine: Practice radio exam

Module Ten: Practice CASA exam

Each module will consist of 45-60 minutes of formal instruction followed by a 15 minute review of the exam for each part. This is to ensure that a complete understanding of the section is held. All modules except for the tour of the Aero Club will be held at SunJet Simulations, 127 Brisbane Rd, Mooloolaba

The student will then be able to practise the theory of each module on the desk top simulators. A realistic model of a Cessna 172 and Piper Sling will be available. These simulators will be available to the students at any time during shop hours.

What you get

- Membership at the Sunshine Coast Aero Club (Allows you to start your actual flight training)
- Bob Tait RPL Study Guide.
- Ninety minutes in 737 simulator session. (to be used as you wish – booking required)
- Unlimited use of a desk top simulator to practise the theory you will be taught.
- Instruction to be held one evening during the week or on Sunday (depending on availability of instructors)
- Successful completion of the course will be viewed favourably towards any application to the scholarship program being offered. This success will not be measured by actual marks but rather by the commitment shown and attendance record to the program by the students.
- Tutoring will be given by a fully qualified Sunshine Coast Aero Club flight training instructor.

If the student decides to proceed with the process of obtaining their licence with the Aero Club, access to the desk top simulators will continue so that they can practise the procedures they have learned as part of their practical training.

Package Cost

Cost of course is \$497.00 which includes everything mentioned above.

Fee due at time of application via the SunJet online shop at:

<http://www.sunjetsim.com>

Where student could go from here....

Completion of this ground based theory will offer the ultimate preparation for young pilots to start their formal flight training with the Sunshine Coast Aero Club. Under the professional guidance of one of their instructors, students can work on obtaining their recreational pilots licence and above.

<https://www.sunshinecoastaeroclub.com.au/learn-to-fly/>

Tutoring with SunJet Simulations and Sunshine Coast Aero Club will produce a better trained, better prepared pilot....at a greatly reduced cost to the student.

What are you waiting for? Start your training today!

Contact SunJet Simulations at 07- 5477-7728

Or E-mail info@sunjetsim.com

SunJet Simulations

Student Pilot Tutoring Program Application

Name: _____

Address: _____

Phone: _____

E-Mail: _____

If under 18, parent or guardian approval is required

Parent/Guardian Name: _____

Address: _____

Phone: _____

E-Mail: _____

Office Use:

Course Start Date: _____

Payment received: _____

Manual given: _____

Membership Number: _____

Membership Card issued: _____

MEMBERSHIP APPLICATION FORM

APPLICANT INFORMATION

Name:	
Date of Birth:	Email:
Phone (Home):	Phone (Mobile):

RESIDENTIAL ADDRESS

Address:		
City:	State:	Postcode:

POSTAL ADDRESS

Address:		
City:	State:	Postcode:

EMERGENCY CONTACT DETAILS

Name:			
Contact Number:		Relationship:	

MEMBERSHIP OPTIONS

FLYING MEMBER	SOCIAL MEMBER
Persons who hold or are training for a Flight Crew License (CASA) or Pilot Certificate (RAA).	Persons who wish to enjoy the social amenities and events of the club.
Flying Members have voting rights.	Social Members do not have voting rights.
\$155	\$25

SIGNATURES

I hereby apply for admission as a Flying Member /Social Member of the Sunshine Coast Aero Club.	
In consideration of me being accepted as a member I agree to be bound by the terms and conditions of the Sunshine Coast Aero Club constitution.	
I have read and agreed with the Sunshine Coast Aero Club Privacy Policy, Media Release Policy and Child Protection Policy.	
Signature of applicant:	Date:
(If applicant is under 18 – Guardian Signature:)	
Signature of witness:	Date:

OFFICE USE ONLY

Secretary Endorsement Signature:	Date:
MFM Entered (Name):	Date: