

Skill Section

Preface

Participants, instructors and assessors should take note of the conditions as laid down in the Award Handbook. This programme is for guidance and is not to be taken as a rigid syllabus. To indicate the content appropriate to young people with varying degrees of knowledge and experience, it is arranged under three headings: '**For beginners**', '**For those with some knowledge**' and '**For the more advanced**', and participants are free to select as broad or as restricted an aspect of this skill as they wish, but appropriate social and cultural aspects are to be covered.

TRANSPORTATION

AVIATION IN NEW ZEALAND

Introduction

These programmes contain safety requirements which must be followed.

Participants should give thought to the social and environmental implication of motorised transport and of transport as a leisure pursuit. The evolution of transport as an economic necessity and its importance to nations at different stages of development may also form useful areas of study.

For assessment, each participant is to produce evidence of regular involvement over the required time. This may take the form of a certificate of attendance at instruction classes, a diary or log/note book or similar.

All safety regulations must be strictly observed.

Beginners should:

- 1 Understand the laws applying to flying at Private Pilot Licence level:
 - a) Know the licence categories and privileges of a student pilot, commercial pilot and airline transport pilot, having regard to the passage of passengers
 - b) Have an awareness of controlled airspace in their area
 - c) Know the four legal documents to be carried on every flight in New Zealand.
- 2 Aircraft technical knowledge
 - a) Have a basic knowledge of how an aircraft moves through the air and the forces acting on it
 - b) Know the basic controls and parts of an aircraft: propeller, engine, fuselage, wings, rudder, flaps, ailerons, elevator and undercarriage
 - c) Know the effects of moving the basic controls, ie rudder, elevator and ailerons.
- 3 Navigation
 - a) Understand the difference in airspeed and groundspeed, effect of headwind, tailwind and cross-wind
 - b) Examine a chart and note special features, eg restricted areas, controlled airspace, relief and appreciation of scale, latitude and longitude.
- 4 Meteorology
 - a) Follow the weather patterns from the local daily paper for a fortnight and have some basic understanding of weather
 - b) Know how to obtain forecasts and how to apply this to a flight plan.
- 5 Know the safety precautions to observe when on an airfield. Visit an airfield.

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- 6 Recognise at least five present day aircraft used in New Zealand.
- 7 Research the early history of flight and the pioneers of aviation in New Zealand.

Those with some knowledge should:

- 8 Air experience-undertake at least one hour dual in an aircraft or glider to gain a practical knowledge of the effect of controls.
- 9 Air law
 - a) Understand the Visual Flight Guide and its purpose
 - b) Know the phonetic alphabet and aerodrome light signals.
- 10 Air navigation
 - a) Simple flight planning, plotting tracks, measuring distances, calculating headings, timing
 - b) Aircraft compass, magnetic and true north, variation and deviation
 - c) Relationship between nautical miles, statute miles, knots and MPH
 - d) Triangle of velocity, wind affecting tracks.
- 11 Aircraft technical knowledge
 - a) Understand how a four stroke engine works
 - b) Properties of the air and how this affects performance
 - c) Centre of gravity and weight appreciation
 - d) Stalling, spinning and recovery understanding
 - e) Basic understanding of how aircraft instruments work.
- 12 Airmanship-a general appreciation relating to the operation of an aircraft.
- 13 Meteorology
 - a) The atmosphere, composition and atmospheric pressure measurement
 - b) Pressure systems, fronts, what they are
 - c) Different cloud types and wind effects.
- 14 Gain two Private Pilot Licence subjects OR do five hours of flying instruction.
- 15 Have some understanding of the effect of aviation on economic and human life.

The more advanced should:

- 16 Have passed all Private Pilot Licence subjects.
- 17 Advance to flying solo towards a restricted Private Pilot Licence.
- 18 Appreciate environmental implications eg pollution control, sound levels, airport planning and size.

The very advanced should:

- 19 Gain a restricted Private Pilot Licence.