TRAINING STANDARDS

MOUNTAIN EXPERIENCE
FLYING

Version 1.0

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OVERVIEW

All training flights in the pursuit of a *Mountain Experience Flight* shall follow the requirements outlined in this manual, Canadian Aviation Regulations, Flight Training Manual and Flight Instructor Manual.

TRAINING REQUIREMENTS

Experience

The student looking for a mountain experience flight shall already have obtained a minimum of a Recreational Pilot Permit.

RECOMMENDED READING

A great source of information on mountain flying can be found in the *Mountain Flying Bible* by Sparky Imeson (available from the SkyQuest store).

MEDICAL REQUIREMENTS

Ensure that your student has a valid Category IV, III, or I medical certificate.

FLIGHT DURATION

The flight duration for the training flight is approximately 2.4 hours.

FLIGHT LOGGING

As this type of training is typically done in one flight, the entire flight shall be logged as daytime DUAL.

COMMUNICATIONS

All radio communications shall be accordance with the Training Standards: Radio Communications Manual.

AIRCRAFT OPERATIONS

Reserved

PASSENGERS

Passengers *are* permitted on this flight as this is not a rating.

CANADIAN AVIATION REGULATIONS

EQUIPMENT REQUIREMENTS

CARS 605.14 – 605.16

FLIGHT INSTRUMENTS

- Referring to CARS 605.14 and AIM RAC Annex you will note that basically all standard equipment is required to be installed and operational, this should include but not limited to the primary six flight instruments, as well as tachometer, compass, engine gauges, and fuel gauges.

PILOT EQUIPMENT

- Must carry appropriate clothing for mountainous terrain
- Must carry the emergency survival bag located behind the main desk.

FUEL REQUIREMENTS

- Flight instructors must ensure that all students are briefed on the fuel requirements as per CARS 602.88(3)(i).

- Additionally flight instructors will ensure that all aircraft carry sufficient fuel for the intended flight and have 60 minutes reserve fuel based on normal consumption. This requirement is specified in the section 3 of the Company Rules & Regulations Manual.

- The recommendation for this flight is that **maximum** allowable fuel be carried on board to ensure the greatest margin for safety.

PUBLICATION REQUIREMENTS

- Must have all current charts and publications for the intended flight, as well as any possible diversions – *CARS 602.60(1)(b)*

WEATHER MINIMA

- Flight instructors must ensure that all students are briefed on the weather minima as per CARS 602.14 and 602.15.

- Flight instructors must ensure that all students are briefed on the weather minima as specified in the section 4 of the Company Rules & Regulations Manual.

FLIGHT FOLLOWING

FLIGHT PLANS

- Must be filed and posted on the flight desk bulletin board. Contact number must be filed with the plan. The person that was used a contact person must be advised of this responsibility.

FLIGHT ITINERARY

- At times when flight training staff will be at attendance in the school a flight itinerary may be used in lieu of a flight plan.

- Must be posted on the flight desk bulletin board.

- The staff member(s) remaining at SkyQuest must be advised that they are providing flight following.

AIR INSTRUCTION

TRAINING SEQUENCE

Reminder to instructors: not all students enrolled in this course are coming directly from a recent pilot training program. It is possible that some students may have obtained their pilot licence a number of years ago, trained in another part of the country, or received their training prior to the current requirements for instrument training, therefore some of their skills may be lacking.

ROUTING

The routing for the flight training **must** be as follows:

CYNJ → CYPS (Over the top)
CYPS → CYNJ (low level @ 2000' via Lillooet River, Sloquet Creek and Stave River)

FLIGHT SEQUENCE

OUTBOUND LEG

Objective # 1 (Orientation/Use of POH/High Altitude Flying)
Objective # 2 (Ridge Crossing/Mountain Wave Activity)
Objective # 3 (Navigation)

INBOUND LEG

Objective # 4 (Low Level Flying)
Objective # 5 (Lee Side/Wind Side Mountain Flying)
Objective # 6 (Minimum Radius Turns/Valley Clearing Turns)
Objective # 7 (Navigation)

**** THIS ROUTING MUST BE FOLLOWED UNLESS PRIOR PERMISSION ****
**** HAS BEEN GIVEN BY THE CFI ****

OUTBOUND LEG

OBJECTIVE # 1: ORIENTATION/USE OF POH/HIGH ALTITUDE FLYING

Content

This objective shall consist of getting the student familiar with the performance of the aircraft while climbing to higher altitudes. During this portion, attention should be paid to TAS vs. IAS and landmark recognition from high altitude. This is also a *great* opportunity to utilize the POH to determine aspects such as time to climb, expected TAS and cruise performance.

Standard

At the completion of this objective the student will have attained a working understanding of relating POH performance to actual performance as well as a basic understanding of higher altitude navigation.

OBJECTIVE # 2: RIDGE CROSSING/MOUNTAIN WAVE ACTIVITY

Content

The objective during this phase is to enhance the student's awareness of potential mountain wave activity and the hazards associated. If present, pointing out indicators such as lenticular and rotor clouds will assist the student to recognize potential mountain wave activity. The second part of this objective is to point out the correct procedure for ridge crossings.

Standard

The student will be able to recognize and understand the impact that mountain waves can have on an aircrafts performance. They will also be able to identify ridges and apply the proper heading to safely cross a mountain ridge.

OBJECTIVE # 3: NAVIGATION

Content

The last objective during the high altitude leg is to be able to successfully navigate. Using valleys, lakes and mountain tops as they relate between what the pilot sees visually and what is depicted on the VNC can be somewhat difficult to a low-time pilot.

Standard

Students will be able to determine, within a reasonable degree of accuracy, where they are currently located and be able to verify this position based on topographical landmarks that are seen visually and then related to the VNC. From there, they should also be able to relay an ETA to CYPS.

INBOUND LEG

OBJECTIVE # 4: LOW LEVEL FLYING

Content

Refresher for most pilots with regards to the hazards of low level flight. The student will generally wish to fly down the middle of the valley. The danger in this is that if the student were to need to turn around, only half the available area for turning is able to be used. During this section, the student will also incorporate topographical map reading into their visual cues from the area they are flying through.

Standard

Student will be able to demonstrate use of landmarks for navigational aids. Additionally, the student should be made aware of potential landing sites and how to determine an appropriate course of action in the event of an emergency situation. Lastly, the student will be made aware of the importance of flying to one side of the valley.

OBJECTIVE # 5: LEE SIDE/WIND SIDE MOUNTAIN FLYING

Content

This section is to try and make the student become more aware of the effects/hazards of choosing which side of a valley to fly on. Sunny sides will generally indicate updrafts as the hot air will rise. Dark/shaded sides of the valley can generally indicate downdrafts.

Standard

The student will be able to identify the hazards associated with choosing the lee side of mountain flying and how the performance of the aircraft *may not* be able to outperform the power of the wind(s).

OBJECTIVE # 6: MINIMUM RADIUS TURNS/VALLEY CLEARING TURNS

Content

Introduction to minimum radius turns and the importance of valley clearing turns (for improved visibility).

Standard

Students must demonstrate the ability to execute a valley clearing turn when navigating around sharp corners. This clearing turn will greatly improve visibility and, likely, will let the student avoid entering box canyons. During this exercise the student will also have a demonstration of and be able to practice minimum radius turns. For this exercise, flaps to 30^{o}, power full and steep turn. The critical point to this lesson is to pay close attention to the attitude of the aircraft in order to avoid stalling.

OBJECTIVE # 7: NAVIGATION

Content

Instructing the student how to verify their position in a low level flight situation in order to maintain an accurate ETA as well as positional awareness during flight.

Standard

The student will be able to use appropriate charts in order to safely navigate their way through the canyons. Additionally, the student should be able to provide an accurate ground speed and ETA to the destination airport.

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