

First Year Flight Syllabus

Fall 2016

NOTE: The requirements for the Commercial Pilot License include:

Total Time:

- 200 Hours Flight Time
- 100 Hours Pilot-In-Command (PIC)
- 20 Hours PIC Cross-Country

Training Time - must be recorded in Pilot Training Record:

35 Hours Dual (not including simulator time):

- 5 Hours Night, including 2 Hours Night Cross-Country
- 5 Hours Cross-Country (may include 2 Hours Night Cross-Country from above)
- 20 Hours Instrument (maximum 10 Hours in simulator)

30 Hours Solo:

- 5 Hours Night, with 10 takeoffs and landings
- 300 nm **Radius** Cross-Country, including 3 *Full Stop* Landings away from point of departure (ensure log book entry is correct)

Category 1 Medical

Remember: You're Transport Canada Written Exam and your Flight Test must occur within 12 months of the License Application.



Commercial Aviation Diploma Program First Year Flight Syllabus

The First year Commercial Aviation Diploma Program Flight Syllabus is based on a repetitive outline. Each week there is a Dual Mutual flight, a Mutual flight, and a Solo Simulator session. There is a fourth lesson each week that takes various forms. It may be Dual Mutual, Dual, Mutual, or Solo. The fourth lesson may be in a simulator or in an aircraft.

Dual (D)

A lesson with one instructor and one student.

Dual Mutual (DM)

A Dual Mutual flight consists of a lesson with one instructor working with two students. The students are to work as a team. The pre and post-flight activities are shared and the briefings are conducted together. The flight itself is arranged that one student will fly the first lesson while the other observes from the rear seat. During a stop the students will switch places and the lesson will continue.

Mutual (M)

Similar to the Dual Mutual, but without an instructor. The students are to work as a team. The pre and post-flight briefings are conducted together. The flight itself is arranged that one student will fly the first lesson while the other observes from the right seat. During a stop the students will switch places and the lesson will continue.

Solo (S)

Solo is one student working alone.

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Dual Simulator (DS)

A simulator lesson with one instructor and one student.

Solo Simulator (SS)

A simulator session with one student working alone.

Marking Scale

Southern Interior Flight Centre Marking scale is taken from the Transport Canada Private and Commercial, Multi Engine, and Instrument Rating Flight Test Guides. These criteria assume no unusual circumstances. Consideration will be given to unavoidable deviations from the published criteria due to weather, traffic, or other situations beyond the reasonable control of the candidate.

When applying the 4-point scale, award the mark that best describes the weakest element(s) applicable to the candidate's performance. Remarks to support mark awards of 1 or 2 must link to a safety issue, a qualification standard, or an approved technique or procedure.

4	<p>Performance is well executed considering existing conditions:</p> <ul style="list-style-type: none"> • Aircraft handling is smooth and positive with a high level of precision. • Technical skills indicate a thorough knowledge of procedures, aircraft systems, limitations and performance characteristics. • Situational awareness is indicated by continuous anticipation and vigilance. • Flight management skills are exemplary and threats are consistently anticipated, recognized and well managed. • Safety margins are maintained through consistent and effective management of aircraft systems and mandated operational protocols.
3	<p>Performance is observed to include minor errors:</p> <ul style="list-style-type: none"> • Aircraft handling with appropriate control input includes minor deviations. • Technical skills indicate an adequate knowledge of procedures, aircraft systems, limitations and performance characteristics to successfully complete the task. • Situational awareness is adequately maintained as candidate responds in a timely manner to cues and changes in the flight environment to maintain safety while achieving the aim of the sequence/item. • Flight management skills are effective. Threats are anticipated and errors are recognized and recovered. • Safety margins are maintained through effective use of aircraft systems and mandated operational protocols.
2	<p>Performance is observed to include major errors:</p> <ul style="list-style-type: none"> • Aircraft handling is performed with major deviations and/or an occasional lack of stability, over/under control or abrupt control input. • Technical skills reveal deficiencies either in depth of knowledge or comprehension of procedures, aircraft systems, limitations and performance characteristics that do not prevent the successful completion of the task. • Situational awareness appears compromised as cues are missed or attended too late or the candidate takes more time than ideal to incorporate cues or changes into the operational plan. • Flight management skills are not consistent. Instrument displays, aircraft warnings or automation serve to avert an undesired aircraft state by prompting or remedying threats and errors that are noticed late. • Safety margins are not compromised, but poorly managed.
1	<p>Performance is observed to include critical errors or the <i>Aim</i> of the test sequence/item is not achieved:</p> <ul style="list-style-type: none"> • Aircraft handling is performed with critical deviations and/or a lack of stability, rough use of controls or control of the aircraft is lost or in doubt. • Technical skills reveal unacceptable levels of depth of knowledge or comprehension of procedures, aircraft systems, limitations and performance characteristics that prevent a successful completion of the task. • Lapses in situational awareness occur due to a lack of appropriate scanning to maintain an accurate mental model of the situation or there is an inability to integrate the information available to develop and maintain an accurate mental model. • Flight management skills are ineffective, indecisive or noncompliant with mandated published procedures and/or corrective countermeasures are not effective or applied. • Safety margins are compromised or clearly reduced.

G1000 Course Outline

Prerequisite: Private Pilot's License or higher with current medical

Required Ground School: 5 Hours- VFR and IFR Transition

Instructor Signature: _____

Date: _____

Prerequisite: Completion of the G1000 transition course

Required Flight Training: - 1.5 -hour aircraft checkout
- 2 G1000 based VFR cross-country flights

Instructor Signature: _____

Date: _____

Lesson 1-D **Check on Type C-172S** **C-172S**
Dual 1.2 hours **Not Mutual**
Date Completed: _____ **Day**
Instructor Signature: _____

Aim

The aim of this flight is to ensure that the student's flying skills are at Private Pilot standards before advancing to new skills in the Commercial syllabus. This flight also serves as a checkout in a C-172.

Required Reading

Flight Training Manual
Part 2 – Exercises 11 through 24
C-172S Pilot Operating Handbook

Preflight Briefing

Type Checkout – As Required

Flight Sequences

1. Aircraft Preflight Inspection
2. Use of Aircraft Check List
3. Soft/Short Field Takeoffs & Landings at CYLW
4. Steep Turns, Slow Flight
5. 1st flight for the G1000 checkout

Notes:

Lesson 2-D **Check on Type C-172N** **C-172N**
Dual 1.2 hours **Not Mutual**
Date Completed: _____ **Day**
Instructor Signature: _____

Aim

The aim of this flight is to ensure that the student's flying skills are at Private Pilot standards before advancing to new skills in the Commercial syllabus. This flight also serves as a checkout in a C-172N.

Required Reading

Flight Training Manual
Part 2 - Exercises 11 through 24
C-152 Pilot Operating Handbook

Preflight Briefing

Type Checkout – As Required

Flight Sequences

1. Aircraft Preflight Inspection
2. Use of Aircraft Check List
3. Soft/Short Field Takeoffs & Landings at CYLW
4. Stalls, Spins, Spiral Dives

Notes:

Aim

The aim of this session is to review and practice basic full panel instrument flying, and flying a “U” track pattern using Rate 1 turns and timed legs.

Required Reading

Flight Training Manual
Part 2 - Exercise 24

Preflight Briefing

The “T” Scan and Rate 1 Turns

The instructor will show the student how to start and set up the Frasca 131 for solo use.

Flight Sequences

1. Straight and Level Flight
2. Rate 1 Turns
3. Climbs and Descents
4. Climbing and Descending Turns/Rate 1 Turns
5. Partial Panel Straight and Level – Various Airspeeds
6. Partial Panel Timed Turns
7. Partial Panel Climbing and Descending – Various Airspeeds and Rates

Notes:

Aim

The aim of this flight is to review flight planning, cross-country procedures and mountain flying techniques.

Required Reading

Flight Training Manual

Part 2 - Exercise 23

Mountain Flying

Preflight Briefing

Navigation and Mountain Flying Techniques

NOTE: Each student is required to do a detailed flight plan, weight & balance, and weather assessment.

Flight Sequences

First Student: CYLW-CYRV

Second Student: CYRV-CYLW

1. Flight Planning
2. File Flight Plan
3. Soft Field Takeoff
4. Open Flight Plan & Departure Procedures
5. Set Heading Procedures
6. Enroute Procedures
7. Soft Field Landing
8. Close Flight Plan
9. Review of Completed Navigation Log
10. 2nd flight G1000 checkout

Remember – Cross-Country Survival Gear**Notes:**

Aim

The aim of this flight is to review flight planning, cross-country procedures and mountain flying techniques.

Required Reading

Flight Training Manual
Part 2 - Exercise 23
Mountain Flying

Preflight Briefing

Navigation and Mountain Flying Techniques

NOTE: Each student is required to do a detailed flight plan, weight & balance, and weather assessment.

Flight Sequences

First Student: CYLW-CYRV

Second Student: CYRV-CYLW

1. Flight Planning
2. File Flight Plan
3. Soft Field Takeoff
4. Open Flight Plan & Departure Procedures
5. Set Heading Procedures
6. Enroute Procedures
7. Soft Field Landing
8. Close Flight Plan
9. Review of Completed Navigation Log

Remember – Cross-Country Survival Gear

Notes:

Aim

The aim of this flight is to improve the student's partial panel instrument flying skills.

Required Reading

Flight Training Manual

Part 2 – Exercise 24

Flight Sequences

1. Straight and Level Flight / Various Airspeeds
2. Climbing and Descending / Various Airspeeds
3. Rate 1 Turns / Climbing & Descending
4. Partial Panel Straight and Level – Various Airspeeds
5. Partial Panel Turns
6. Partial Panel Climbing and Descending – Various Airspeeds and Rates

**Do not log solo simulator sessions
in your PTR or personal log book.**

Notes: can use instrument patterns found in Appendix A

Lesson 7-D
Dual 1.5 hours
Date Completed: _____
Instructor Signature: _____

Night Flying

C-172
Not Mutual
Night

Aim

The aim of this flight is to introduce the student to night flying.

Required Reading

Flight Training Manual
Part 2 – Exercise 25

Preflight Briefing

Night Flying Techniques and Requirements

Flight Sequences

1. Circuits at CYLW
2. Landing Light Failure
3. PAPI Failure

Bring your flashlight.

Notes:

Aim

The aim of this flight is to review flight planning, cross-country procedures, mountain flying techniques and uncontrolled aerodrome procedures.

Required Reading

Flight Training Manual
Part 2 – Exercise 23
Mountain Flying

Preflight Briefing

Set Heading Procedures
Uncontrolled Aerodrome Procedures
NOTE: Each student is required to do a detailed flight plan, weight & balance, and weather assessment.

Flight Sequences

First Student: CYLW – CAU3 – CZGF
Second Student: CZGF – CAU3 – CYLW
1. Flight Planning, File Flight Plan, Open Flight Plan
2. Soft Field Takeoff
3. Set Heading Procedures
4. Enroute Procedures
5. Soft Field Landing
6. Close Flight Plan
7. 3rd Flight G1000 checkout

Remember – Cross-Country Survival Gear

*****MAKE SURE YOU RECEIVE A WEATHER BRIEFING*****

Notes:

Aim

The aim of this flight is to review flight planning, cross-country procedures, mountain flying techniques and uncontrolled aerodrome procedures.

Required Reading

Flight Training Manual
Part 2 – Exercise 23
Mountain Flying

Preflight Briefing

Set Heading Procedures
Uncontrolled Aerodrome Procedures
NOTE: Each student is required to do a detailed flight plan, weight & balance, and weather assessment.

Flight Sequences

First Student: CYLW – CAU3 – CZGF
Second Student: CZGF – CAU3 – CYLW
1. Flight Planning, File Flight Plan, Open Flight Plan
2. Soft Field Takeoff
3. Set Heading Procedures
4. Enroute Procedures
5. Soft Field Landing
6. Close Flight Plan

Remember – Cross-Country Survival Gear

***MAKE SURE YOU RECEIVE A WEATHER
BRIEFING***

Notes:

Aim

The aim of this session is to improve the student's partial panel instrument flying skills.

Required Reading

Flight Training Manual

Part 2 – Exercise 24

Preflight Briefing

Instrument Flying

Flight Sequences

1. Straight and Level Flight / Various Airspeeds
2. Climbing and Descending / Various Airspeeds
3. Rate 1 Turns / Climbing & Descending
4. Partial Panel Straight and Level – Various Airspeeds
5. Partial Panel Turns
6. Partial Panel Climbing and Descending – Various Airspeeds and Rates

Notes:

Lesson 11-S **Night Flying**
Solo 1.5 hours
Date Completed: _____
Student Signature: _____

C-172
Not Mutual
Night

Aim

The aim of this flight is to practice basic night flying techniques including emergency procedures.

Required Reading

Flight Training Manual
Part 2 – Exercise 25

Flight Sequences

1. Circuits at CYLW (ONLY at CYLW)
2. Landing Light Failure
3. PAPI Failure
4. Emergencies

Bring your flashlight.

Notes:

Aim

The aim of this lesson is to refine basic instrument flying skills, and to introduce the student to VOR navigation.

Required Reading

Flight Training Manual
Part 2 – Exercise 24

Preflight Briefing

Aircraft Documents
VOR Introduction

Flight Sequences

First Student: CYLW – CZAM

Second Student: CZAM – CYLW

1. Climbs and descending turns to predetermined altitudes and headings (Appendix A)
2. Unusual Attitudes Both Full and Partial Panel
3. Partial Panel Straight and Level – Various Airspeeds
4. Partial Panel Turns
5. Partial Panel Climbing and Descending – Various Airspeeds and Rates
6. VOR Navigation

Notes:

Aim

The aim of this lesson is to refine basic instrument flying skills, and to practice VOR navigation.

Required Reading

Flight Training Manual
Part 2 – Exercise 24

Preflight Briefing

Aircraft Documents
VOR Navigation

Flight Sequences

First Student: CYLW – CZAM

Second Student: CZAM – CYLW

1. Climbing and descending turns to predetermined altitudes and headings (Appendix A)
2. Climbing and Descending – Various Airspeeds and Rates
3. Unusual Attitudes Both Full and Partial Panel
4. Partial Panel Straight and Level – Various Airspeeds
5. Partial Panel Turns
6. Partial Panel Climbing and Descending – Various Airspeeds and Rates
7. VOR Navigation

Remember: Your partner is the safety pilot. Ensure he/she is looking outside while you are on the instruments.

Notes:

Aim

The aim of this session is to improve the student's partial panel instrument flying skills.

Required Reading

Flight Training Manual
Part 2 –Exercise 24

Preflight Briefing

Instrument Flying

Flight Sequences

1. Straight and Level Flight / Various Airspeeds
2. Climbing and Descending / Various Airspeeds
3. Rate 1 Turns / Climbing & Descending
4. Partial Panel Straight and Level – Various Airspeeds
5. Partial Panel Turns
6. Partial Panel Climbing and Descending – Various Airspeeds and Rates

Notes:

Lesson 15-D **Night Flying-CYVK**
Dual 1.5 hrs
Date Completed: _____
Instructor Signature: _____

C-172
Not Mutual
Night

Aim

The aim of this flight is to review basic night flying techniques including emergency procedures.

Required Reading

Flight Training Manual

Part 2 – Exercise 25

Canada Flight Supplement – CYVK Night VFR Procedures

Preflight Briefing

Emergency Procedures at Night

Flight Sequences

1. Circuits at CYVK
2. Emergency Procedures

Bring your flashlight.

Notes:

Aim

The aim of this lesson is to refine basic instrument flying skills, and to introduce the student to ADF navigation.

Required Reading

Flight Training Manual
Part 2 – Exercise 24

Preflight Briefing

Rate 1 Turns
ADF Orientation, Tracking and Intercepts

Flight Sequences

First Student: CYLW – CYYF
Second Student: CYYF – CYLW

1. Pattern A (Appendix A)
2. Pattern B (Appendix A)
3. Climbs and Descents
4. Climbing and Descending Turns to predetermined headings and altitudes (Appendix A)
5. ADF Orientation, Tracking, and Intercepts

Notes:

Lesson 17-M **ADF Navigation** **C-172S**
Solo 1.2 hours **CYLW-CYYF** **Mutual**
Date Completed: _____ **Day**
Student Signature: _____ **1.4 hrs X-C**

Aim

The aim of this flight is to review flying on instruments, and to review the ADF.

Required Reading

Flight Training Manual
Part 2 – Exercise 24

Flight Sequences

First Student: CYLW – CYYF

Second Student: CYYF – CYLW

1. Straight and Level
2. Rate 1 Turns
3. Climbs and Descents
4. Climbing and Descending Turns to predetermined altitudes and headings (Appendix A)
5. Review ADF Orientation, Tracking and Intercepts

Remember: Your partner is the safety pilot. Ensure he/she is looking outside while you are on the instruments.

Notes:

Aim

The aim of this session is to practice radio navigation using VOR, including basic orientation and tracking TO and FROM the station.

Flight Sequence

Depart YXX airport, Rwy 07, climb to 3000' ASL, heading 070°M.

1. Tune, identify and test the HUH VOR 113.0 MHz
2. Set up to track TO the VOR on the 070° Radial
3. On station passage, set up to track FROM the VOR on the 270 Radial
4. Tune, identify and test the YVR VOR 115.9 MHz
5. Track TO the VOR on 080 Radial and then intercept the 070 Radial
6. When over the YVR VOR track FROM the VOR on the 190 Radial
7. Tune, identify and test the YYJ VOR 113.7 MHz
8. Track to the VOR on the 360 Radial

If no difficulty was found with this exercise, try using a wind of 090° / 15 kts

Notes:

Aim

The aim of this flight is to practice basic night flying techniques.

Required Reading

Flight Training Manual

Part 2 – Exercise 25

Flight Sequences

1. Circuits at CYLW (ONLY at CYLW)
2. Landing Light Failure
3. PAPI Failure
4. Emergency Procedures

Bring your flashlight.

Notes:

Aim

The aim of the flight is to review instrument flying skills while introducing basic uses of the Global Positioning Satellite System.

Preflight Briefing

GPS Introduction

Flight Sequence

First Student: CYLW – CYCG

Second Student: CYCG – CYLW

1. Flight Planning, File Flight Plan, Open Flight Plan
2. Departure Procedures
3. Set Heading Procedures
4. Enroute Procedures
5. Tracking Using the GPS
6. Using the GPS Functions 'Nearest' Airport, VOR, ADF, Waypoints, Direct

Notes:

Lesson 21-M **GPS Navigation** **C-172S**
Solo 1.2 hours **CYLW-CYCG** **Mutual**
Date Completed: _____ **Day**
Student Signature: _____ **1.2 hrs X-C**

Aim

The aim of the flight is to review instrument flying skills, and to practice basic navigation using the Global Positioning Satellite System.

Preflight Briefing

GPS Navigation

Flight Sequence

First Student: CYLW – CYCG

Second Student: CYCG – CYLW

1. Flight Planning, File Flight Plan, Open Flight Plan
2. Departure Procedures
3. Set Heading Procedures
4. Enroute Procedures
5. Tracking Using the GPS
6. Using the GPS Functions 'Nearest' Airport, VOR, ADF, Waypoints, Direct

Remember: Your partner is the safety pilot. Ensure he/she is looking outside while you are on the instruments.

Notes:

Aim

The aim of this session is to practice ADF navigation by tracking to various non-directional beacons.

Required Reading

Flight Training Manual

Part 2 – Exercise 24

Flight Sequences

Starting from the Abbotsford Airport (IXX), tune, identify and test the NDB stations listed below and fly direct to each station in sequence:

1. Tune WC (332 KHz)
2. Tune VR (266 KHz)
3. Tune AP (378 KHz)
4. Tune MB (293 KHz)

For increased challenge add wind of 145° / 20kts. Now make sure to track directly to the station and do not follow a “curve of pursuit” – in other words, account for wind drift while homing to the stations.

Notes:

Lesson 23-D **Night Cross-Country** **C-172**
Dual 2.0 hours **CZAM – CYYF** **Not Mutual**
Date Completed: _____ **Night**
Instructor Signature: _____ **2.0 hrs X-C**

Aim

The aim of this flight is to learn basic night cross-country flying techniques.

Required Reading

Flight Training Manual

Part 2 - Exercises 23 & 25

Canada Flight Supplement – CZAM & CYYF

Preflight Briefing

Navigation

Uncontrolled Aerodrome Procedures

Flight Sequence

CYLW – CZAM / CZAM – CYYF / CYYF – CYLW

1. Flight Planning, File Flight Plan, Open Flight Plan
2. Departure Procedures
3. Set Heading Procedures
4. Enroute Procedures

Check NOTAMs to verify that the runways are open, and that all required lights are serviceable.

Remember your survival gear and flashlight!

For the night rating, a total of 5 hours dual is required, including 2 hours cross-country. Ensure that this flight gives you the dual requirements.

Notes:

Lesson 24-DM **Mid-Semester Flight Test** **C-172**
Dual 1.2 hours **CYLW-CZAM** **Mutual**
Date Completed: _____ **Day**
Instructor Signature: _____ **0.4 Hood**
Student Signature: _____ **0.4 hrs X-C**
Student Name: _____
Mark _____ **/76** _____ **%**

Aim

The aim of this flight is to check the student’s progress to ensure that a strong foundation is in place before advancing to more difficult exercises. The marks from this Flight Test will contribute to the semester grade for the Flight Lab. A passing grade is required on this flight before proceeding on to Lesson 28-DM. See pages 4 & 5 for a description of the Marking Scale.

Required Reading

Transport Canada Flight Test Guide – Commercial Pilot License – TP 26545E
Plan a Trip CYLW - CZAM - CZAM - CYWL

Flight Sequences

		Marks
1. Preflight - Flight Data Sheet	1 2 3 4	_____
2. Weather Assessment	1 2 3 4	_____
3. VFR Navigation Log	1 2 3 4	_____
4. Documents	1 2 3 4	_____
5. Aircraft Preflight Inspection	1 2 3 4	_____
6. Emergency Procedures	1 2 3 4	_____
7. Short Field Takeoff	1 2 3 4	_____
8. Departure Procedures	1 2 3 4	_____
9. Enroute Procedures	1 2 3 4	_____
10. Diversion	1 2 3 4	_____
11. Straight & lvl – Various Speeds	1 2 3 4	_____
12. Climb & Decent – Various	1 2 3 4	_____
13. Unusual Attitudes	1 2 3 4	_____
14. Partial Panel Timed Turns	1 2 3 4	_____
15. Partial Panel Unusual Attds	1 2 3 4	_____
16. Steep Turns	1 2 3 4	_____
17. Slow Flight	1 2 3 4	_____
18. Forced Approach	1 2 3 4	_____
19. Soft Field Landing	1 2 3 4	_____
Total:	_____ /76	_____ %

Notes:



Aim

The aim of this flight is to review instrument flying skills, and ADF navigation.

Required Reading

Flight Training Manual
Part 2 – Exercise 24

Flight Sequences

CYLW – CYKA, via the B5 Airway

1. Flight Planning
2. File Flight Plan
3. Enroute Procedures
4. Straight and Level
5. Rate 1 Turns
6. Climbs and Descents
7. Climbing and Descending Turns
8. ADF Orientation, Tracking, and Intercepts

This flight can be completed without going to Kamloops

Remember: Your partner is the safety pilot. Ensure he/she is looking outside while you are on the instruments.

Notes:

Aim

The aim of this session is to review instrument flying skills, and to review VOR and ADF navigation.

Required Reading

Flight Training Manual

Part 2 – Exercise 24

Flight Sequences

1. Straight and Level
2. Rate 1 Turns
3. Climbs and Descents
4. Climbing and Descending Turns
5. Review ADF & VOR Orientation, Tracking and Intercepts

Notes:

Aim

The aim of this flight is to practice basic night flying techniques including emergency procedures.

Required Reading

Flight Training Manual

Part 2 – Exercise 25

Flight Sequences

5. Circuits at CYLW (ONLY at CYLW)

6. Landing Light Failure

7. PAPI Failure

8. Emergencies

Bring your flashlight.

Notes:

Aim

The aim of this flight is to plan a cross-country trip using GPS navigation.

Preflight Briefing:

GPS Navigation

Flight Sequence:

Student 1: CYLW – CYDC (Direct)

Student 2: CYDC - Keremeos - CYYF - CYLW

1. Flight Planning
2. File Flight Plan
3. Soft Field Takeoff
4. Open Flight Plan
5. Enroute Procedures
6. Soft Field Landing
7. Close Flight Plan

Remember – Cross-Country Survival Gear

****Make sure you receive a thorough weather briefing****

Notes:

Lesson 29-M **GPS Navigation** **C-172S**
Solo 1.2 hours **CYLW-CAD5** **Mutual**
Date Completed: _____ **Day**
Student Signature: _____ **1.2 hrs X-C**

Aim

The aim of this flight is to plan a cross-country trip using GPS navigation.

Preflight Briefing

GPS Navigation

Flight Sequence

Student 1: CYLW - CAD5 (Merritt)

Student 2: CAD5 - CYLW

1. Flight Planning
2. File Flight Plan
3. Soft Field Takeoff
4. Open Flight Plan
5. Enroute Procedures
6. Soft Field Landing
7. Close Flight Plan

Remember – Cross-Country Survival Gear

****Make sure you receive a thorough weather briefing****

Notes:

Lesson 30-SS **Instrument Review** **Frasca 131**
Solo 1.0 hours **Not Mutual**
Date Completed: _____ **Day**
Student Signature: _____

Aim

The aim of this session is to review instrument flying skills, and to review ADF and VOR navigation.

Required Reading

Flight Training Manual
Part 2 – Exercise 24

Flight Sequences

1. Straight and Level
2. Rate 1 Turns
3. Climbs and Descents
4. Climbing and Descending Turns
5. ADF & VOR Orientation, Tracking and Intercepts

Notes:

Aim

The aim of this session is to review and practice full and partial panel instrument flying, and to review ADF and VOR navigation.

Required Reading

Flight Training Manual
Part 2 – Exercise 24

Preflight Briefing

Instrument Flying

Flight Sequences

1. Straight and Level Flight / Various Airspeeds
2. Climbing and Descending / Various Airspeeds
3. Rate 1 Turns / Climbing & Descending
4. Partial Panel Straight and Level – Various Airspeeds
5. Partial Panel Turns
6. Partial Panel Climbing and Descending – Various Airspeeds and Rates
7. ADF
8. VOR

Notes:

Lesson 32-D Precision Approaches
Dual 1.2 hours
Date Completed: _____
Instructor Signature: _____

C-172
Not Mutual
Day

Aim

The aim of this flight is to introduce the student to precision approaches.

Required Reading

Flight Training Manual

Part 2 – Exercise 24

Transport Canada Guidance Notes for Power-Off Accuracy Approaches (Edition 1 – September 2005)

Preflight Briefing

Precision Approaches

Flight Sequences

1. Short Field Takeoff
2. Soft Field Takeoff
3. Precision Approach

Notes:

Lesson 33-M **Precision Approaches**
Solo 1.2 hours
Date Completed: _____
Student Signature: _____

C-172
Mutual
Day

Aim

The aim of this flight is to practice precision approaches.

Required Reading

Flight Training Manual

Part 2 – Exercise 24

Transport Canada Guidance Notes for Power-Off Accuracy Approaches (Edition 1 – September 2005)

Preflight Briefing

Precision Approaches

Flight Sequences

1. Short Field Takeoff
2. Soft Field Takeoff
3. Precision Approach

Notes :

Aim

The aim of this session is to practice radio navigation by intercepting radials to and from various VOR stations.

Required Reading

Flight Training Manual
Part 2 – Air Exercises 24

Flight Sequences – Set up the simulator for CYVR

1. Tune, identify and test the YVR VOR/DME (115.90 MHz). Takeoff and climb to 1000' ASL, and then intercept the 070° radial FROM the station.
2. Upon reaching 23 DME from the YVR VOR, tune, identify and test the HUH VOR/DME (113.0 MHz), then track TO the station on the 345° radial.
3. Upon station passage over HUH VOR, intercept and track FROM the station on the 230° radial to the BUICK intersection (23 DME from HUH).
4. Tune, identify and test the YVR VOR/DME (115.9 MHz) and track TO the station on the 157° radial.
5. Once over YVR VOR/DME (115.9 MHz), track FROM the station on the 312° radial.
6. Upon reaching 14 DME the CYVR airport should be in sight. Land at the Vancouver International Airport.

Notes:

Aim

The aim of this flight is to review your progress in ADF and VOR navigation skills.

Reference

Transport Canada Flight Test Guides - Private and Commercial Pilot Licenses - Aeroplane

Flight Sequences

1. ADF Tuning – Tune, Identify and Test All Beacons
2. ADF Tracking – TO & FROM Beacon
3. ADF Orientation – Find Bearing TO & FROM Beacon
4. VOR - Correctly Set Up VOR Receiver
5. VOR Tracking – TO & FROM Station, Wind Correction
6. VOR Orientation
7. VOR Radial Interception
8. Maintain Scan to Commercial Limits, and Prepare for Following Legs

Notes:

Aim

The aim of this flight is to review partial panel instrument procedures, and also to practice forced approaches.

Required Reading

Flight Training Manual
Part 2 – Exercise 21 & 24

Preflight Briefing

Partial Panel

Flight Sequences

First Student: CYLW – CZAM

Second Student: CZAM – CYLW

1. Straight and Level Flight – Partial Panel
2. Climbing and Descending – Partial Panel
3. Timed Turns – Partial Panel
4. Forced Approach

Notes:

Lesson 37-M **Instrument/Forced** **C-172**
Solo 1.2 hours **CYLW-CZAM** **Mutual**
Date Completed: _____ **Day**
Student Signature: _____ **1.2 hrs X-C**

Aim

The aim of this flight is to review partial panel instrument procedures, and also to practice forced approaches.

Required Reading

Flight Training Manual
Part 2 – Exercises 21 & 24

Preflight Briefing

Partial Panel

Flight Sequences

First Student: CYLW – CZAM

Second Student: CZAM – CYLW

1. Straight and Level Flight – Partial Panel
2. Climbing and Descending – Partial Panel
3. Timed Turns – Partial Panel
4. Forced Approaches

Remember: Your partner is the safety pilot. Ensure he/she is looking outside while you are on the instruments.

Notes:

Aim

The aim of this flight is to practice ADF and VOR orientation, tracking and intercepts.

Required Reading

Flight Training Manual

Part 2 – Exercise 24

Flight Sequences

Start in Abbotsford (IXX) with wind of 360/17. Use XX NDB, WC NDB and AP NDB. Set up VOR for HUH and YVR.

1. Takeoff and climb runway heading to 3,000' ASL
2. Turn right to heading of 180, intercept the 060 radial to the HUH VOR
3. After VOR passage track outbound on the 230 radial from the station
4. Once established on the 230 radial, intercept and track to the HUH VOR on the 180 radial
5. After station passage tune in XX NDB and track inbound on a track of 030
6. After crossing XX NDB, intercept and track outbound on a track of 330
7. Once established on this track, tune in WC NDB, intercept and track inbound on a track of 210
8. After crossing WC NDB, intercept and track outbound on a track of 130
9. Tune in XX NDB and track inbound on a track of 060

Notes:

Aim

The aim of this flight is to practice all types of takeoffs and landings.

Required Reading

Flight Training Manual

Part 2 – Exercises 16, 17 & 18

Flight Sequences

1. Normal Takeoffs and Landings
2. Soft Field Takeoffs and Landings
3. Short Field Takeoffs and Landings

Notes:

Aim

The aim of this flight is to practice instrument flying and to review upper air exercises.

Required Reading

Flight Training Manual
Part 2 – Exercise 24

Preflight Briefing

Unusual Attitudes – Full Panel

Flight Sequences

1. Straight and Level Flight / Various Speeds
2. Climbing and Descending Turns / Various Speeds & Rates
3. Unusual Attitudes
4. Steep Turns – Including Minimum Radius Turns
5. Slow Flight
6. Slips
7. Precautionary Landing

Land in Vernon to Switch Pilots

Notes:

Lesson 41-M Instrument/Upper Air Review C-172S
Solo 1.2 hours Mutual
Date Completed: _____ Day
Student Signature: _____

Aim

The aim of this flight is to practice basic instrument flying, and review ADF & VOR navigation as well as precautionary landings.

Required Reading

Flight Training Manual
Part 2 – Exercise 24

Flight Sequences

1. Straight and Level Flight / Various Speeds
2. Climbing and Descending Turns / Various Speeds & Rates
3. ADF & VOR Review
4. Steep Turns – Including Minimum Radius Turns
5. Slow Flight
6. Slips
7. Precautionary Landing

Land in Vernon to Switch Pilots

Remember: Your partner is the safety pilot. Ensure he/she is looking outside while you are on the instruments.

Notes:

Aim

The aim of this session is to review instrument flying procedures, and to review ADF and VOR navigation.

Required Reading

Flight Training Manual
Part 2 – Exercise 24

Flight Sequences

1. Straight and Level Flight
2. Rate 1 Turns
3. Climbs and Descents
4. Climbing and Descending Turns
5. ADF & VOR Orientation, Tracking and Intercepts

Notes:

Lesson 43-D **Upper Air Review**
Dual 1.2 hours
Date Completed: _____
Instructor Signature: _____

C-172
Not Mutual
Day

Aim

The aim of this flight is to review upper air exercises, with the focus on spins and spiral dives.

Required Reading

Flight Training Manual
Part 2 – Exercises 13 & 14

Preflight Briefing

Spin and Spiral Dive – Entry and Recovery

Flight Sequences

1. Steep Turns
2. Slow Flight
3. Stalls
4. Spins
5. Spiral Dives
6. Slips
7. Circuits

Ensure airplane is in the utility category for this flight!

Notes:

**Lesson 44-DM Precautionary and Forced
Dual 1.2 hours
Date Completed: _____
Instructor Signature: _____**

**C-172
Mutual
Day**

Aim

The aim of this flight is to review precautionary landings and forced approaches.

Required Reading

Flight Training Manual

Part 2 – Exercises 21 & 22

C-172 Pilot Operating Handbook – Emergency Procedures

Preflight Briefing

Precautionary Landings and Forced Approaches

Illusions Created by Drift

Flight Sequences

1. Forced Approaches
2. Precautionary Landings
3. Emergency Procedures
4. Illusions Created by Drift
5. CYVK – Uncontrolled Aerodrome Procedures

Switch Pilots in Vernon

Notes:

Aim

The aim of this flight is to review precautionary landings and forced approaches.

Required Reading

Flight Training Manual

Part 2 – Exercises 21 & 22

C-172 Pilot Operating Handbook – Emergency Procedures

Preflight Briefing

Precautionary Landings and Forced Approaches

Flight Sequences

1. Forced Approaches
2. Precautionary Landings
3. Emergency Procedures
4. CYVK – Uncontrolled Aerodrome Procedures

Switch Pilots in Vernon

Notes:

Lesson 46-SS **ADF and VOR**
Solo 1.0 hours
Date Completed: _____
Student Signature: _____

Frasca 131
Not Mutual
Day

Aim

The aim of this flight is to practice instrument flying using partial panel, and review ADF and VOR navigation.

Required Reading

Flight Training Manual
Part 2 – Air Exercises 24

Preflight Briefing

Partial Panel
ADF & VOR – Orientation, Tracking, and Intercepts

Flight Sequences

1. Straight and Level Flight – Partial Panel
2. Climbing and Descending – Partial Panel
3. Timed Turns – Partial Panel
4. VOR – Orientation, Tracking, and Intercepts
5. ADF – Orientation, Tracking, and Intercepts

Notes:

Aim

The aim of this flight is to review upper air exercises.

Required Reading

Flight Training Manual

Part 2 – Exercises 9, 11, 12, 15-18

Preflight Briefing

Transport Canada Flight Test Guide Private and Commercial Pilot Licenses

Flight Sequences

1. Steep Turns
2. Stalls
3. Slow Flight
4. Slips
5. Circuits

Notes:

Lesson 48-D End Semester Flight Test C-172S
Dual 1.2 hours Not Mutual
Date Completed: _____ Day
Instructor Signature: _____ 0.4 Hood
Student Signature: _____ 0.4 hrs X-C
Student Name: _____
Mark _____/80 _____ %

Aim

The aim of this flight is to assess the student's flying progress for the semester. The results of this flight test will contribute substantially to the Semester Flight Lab mark. See pages 4 & 5 for a description of the Marking Scale. Students scoring less than 60% will be required to complete additional training and take a second Flight Test.

Required Reading

Transport Canada Flight Test Guides - Private and Commercial Pilot Licenses
 Plan a Trip CYLW - CZAM - CZAM - CYWL

Flight Sequences		Marks
1. Preflight - Flight Data Sheet	1 2 3 4	_____
2. Weather Assessment	1 2 3 4	_____
3. VFR Navigation Log	1 2 3 4	_____
4. Documents	1 2 3 4	_____
5. Aircraft Preflight Inspection	1 2 3 4	_____
6. Emergency Procedures	1 2 3 4	_____
7. Soft Field Takeoff	1 2 3 4	_____
8. Departure Procedures	1 2 3 4	_____
9. Enroute Procedures	1 2 3 4	_____
10. Diversion Procedures	1 2 3 4	_____
11. Inst. Straight & Level Various	1 2 3 4	_____
12. Climb & Decent Various	1 2 3 4	_____
13. Unusual Att – Full Panel	1 2 3 4	_____
14. Unusual Att – Partial Panel	1 2 3 4	_____
15. Timed Turns Partial Panel	1 2 3 4	_____
16. ADF Track To and From	1 2 3 4	_____
17. VOR Track To and From	1 2 3 4	_____
18. Stalls	1 2 3 4	_____
19. Forced Approach	1 2 3 4	_____
20. Short Field Landing	1 2 3 4	_____
Total	_____ %	_____ /80

Notes:



Lesson 49-DS End Semester Simulator Test Frasca 131
Dual 1.0 hours **Not Mutual**
Date Completed: _____ **Day**
Instructor Signature: _____ **1.0 Sim**
Student Signature: _____
Student Name: _____
Mark _____ **/40** _____ **%**

Aim

The aim of this flight is to assess the student’s flying progress in ADF and VOR navigation skills. Marks from this Progress Check will contribute to the semester grade for the Flight Lab. See pages 4 & 5 for a description of the Marking Scale. Students scoring less than 60% will be required to complete additional training and take a second Flight Test.

Required Reading

Transport Canada Flight Test Guide Private and Commercial Pilot Licenses

Flight Sequences

		Marks
1.	Tune, Identify, Test All Stations 1 2 3 4	_____
2.	ADF Tracking TO & FROM 1 2 3 4	_____
3.	Orient Find BRG TO & FROM 1 2 3 4	_____
4.	VOR Correct Setting of VOR 1 2 3 4	_____
5.	Track TO & FROM, Wind 1 2 3 4	_____
6.	Orientation 1 2 3 4	_____
7.	Intercepting Radials 1 2 3 4	_____
8.	Scan, Commercial Limits 1 2 3 4	_____
9.	ADF Theory 1 2 3 4	_____
10.	VOR Theory 1 2 3 4	_____
	Total: _____ % _____/40	

Notes:

Happy Holidays



Appendix A



EXERCISE 24

Climbs, Descents and Turns to Predetermined Altitudes and Headings

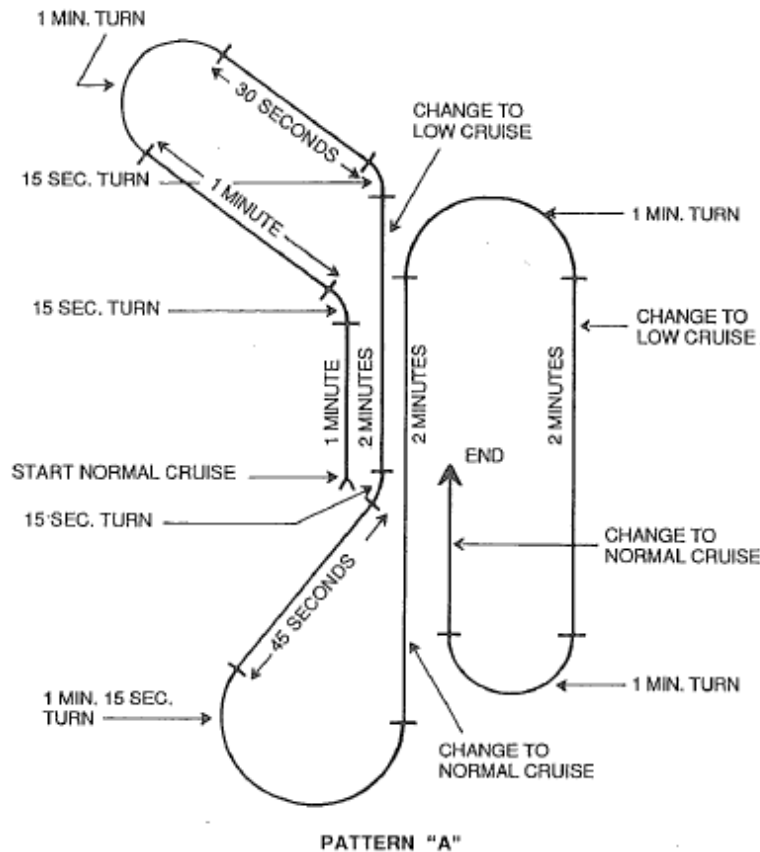
- (1) DEMONSTRATION — *Climbs and Turns to Predetermined Altitudes and Headings (Climb 1,000 feet and turn 360°)*
 - (a) Change airspeed to climbing airspeed in straight and level flight.
 - (b) When the clock second hand indicates the starting time (12, 3, 6, or 9), change pitch, bank, and power simultaneously. Enter a standard rate climbing turn (3° per second and 500 feet per minute).
 - (c) Control bank as in timed turns, checking heading every 15 seconds after the first 30 seconds.
 - (d) Control pitch as in rate climbs, checking altitude every 15 seconds after the first 30 seconds.
 - (e) Consider lag in heading and altitude. Maintain lag throughout the manoeuvre.
 - (f) Roll out on correct heading and level off on correct altitude, regardless of time.
- (2) DEMONSTRATION — *Descents and Turns to Predetermined Altitudes and Headings (Descend 1,000 feet and turn 360°)*
 - (a) Change airspeed to descending airspeed in straight and level flight.
 - (b) Make a descending turn paralleling procedures outlined above for climb.
- (3) STUDENT PRACTICE
Make climbs, descents and turns to altitudes and headings:
 - (a) With all available instruments.
 - (b) Without the heading indicator and attitude indicator.

Pattern "A"

The purpose of both Pattern "A" and Pattern "B" is to further develop the pilot's ability to control the aircraft without deliberate thought. These patterns help prepare the student for the holding patterns and procedure turns flown during radio navigation. Initial practice should be on cardinal headings for simplification; however, as proficiency increases the student should be able to accomplish the patterns on any heading. The instructor may make various changes in the patterns, or the patterns may be flown over a navigational facility, correcting for drift on each leg.

EXERCISE 24

- (1) *Brief Student Thoroughly Prior to the Flight, and Provide Pattern "A" in a Form Suitable for Easy Reference in the Aircraft.*
- (2) *Performance of Manoeuvre in the Aircraft*
 - (a) This manoeuvre should be performed first with all available instruments, then on partial panel.
 - (b) Start Pattern "A" and demonstrate through the first three turns, then have the student continue.



EXERCISE 24

- (c) Timing should start when the clock second hand is on a cardinal point, preferably the 12 o'clock position.
- (d) The timing for this pattern is consecutive in that the time for each leg is started when control pressure is applied to recover from the preceding turn.
- (e) After recovery from turns, allow sufficient time for the compass card to stop oscillating, then note the heading and correct if necessary. An exception is the 30-second leg. If you note an error in heading here, compensate for it by lengthening or shortening the time allotted for the next turn.
- (f) The turn needle and magnetic compass must be observed closely at all times. To correct a heading, use a timed turn (for small heading changes, use a half standard rate turn).
- (g) An efficient cross-check is required during airspeed changes so that corrections may be applied immediately.

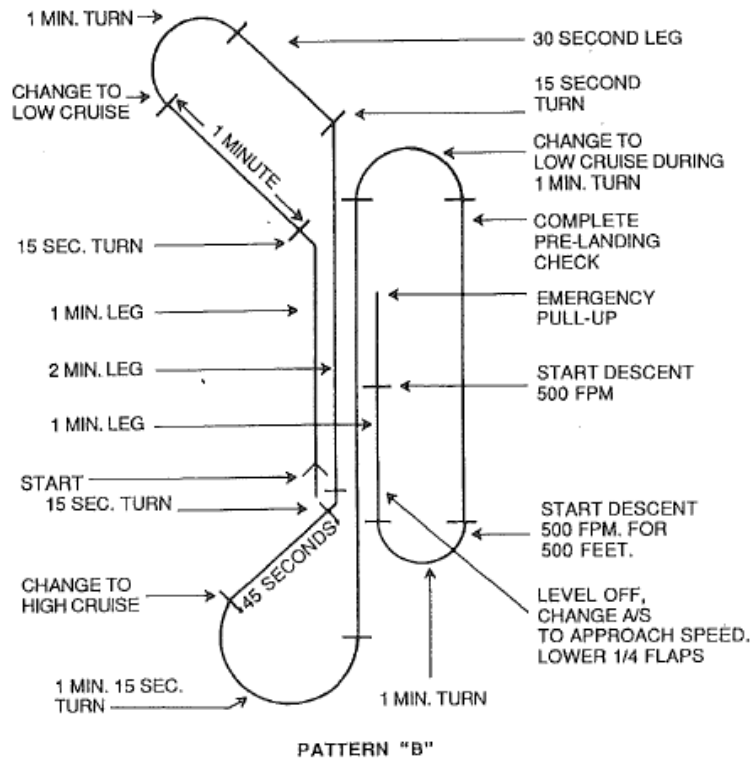
Pattern "B"

- (1) *Brief Student Thoroughly Prior to the Flight, and Provide Pattern "B" in a Form Suitable for Easy Reference in the Aircraft.*
- (2) *Performance of Manoeuvre in the Aircraft*
 - (a) Do not demonstrate unless absolutely necessary.
 - (b) All available instruments are used.
 - (c) Roll out on headings regardless of time.
 - (d) When changing airspeed in turns, simultaneously change bank and power; also pitch if applicable.
 - (e) The descending final turn is made at a rate of 500 feet per minute.
 - (f) The final descent is made to a minimum altitude set by the instructor, or until the time expires, whichever comes first.
 - (g) The emergency pull-up is made as normal go-around procedure, climbing to the original altitude.

Radar Approach (PAR)

- (1) *Brief Student Thoroughly Prior to Flight*
- (2) DEMONSTRATION
 - (a) Position the aircraft on a downwind leg and on interphone simulate the initial call-up, the surveillance radar controller, and the final controller.

EXERCISE 24



- The student reads back all headings and altitudes given, and acknowledges all other transmissions except when instructed otherwise by the final approach controller.
- Perform the pre-landing check on the downwind leg. Change airspeed to initial approach airspeed and set flaps as appropriate.
- Make all heading changes in the pattern with a standard rate turn.
- Turn to base leg and complete the final cockpit check.