

# UNIVERSITY of DUBUQUE

COMMERCIAL PILOT
CERTIFICATION
TRAINING COURSE OUTLINE

# INIVERSITY

This is to certify that

is enrolled in the FAA approved

COMMERCIAL PILOT CERTIFICATION COURSE conducted at the University of Dubuque School #GV8S178Q

**Enrollment Date** 

Primary Flight Instructor

Chief Flight Instructor

#### COMMERCIAL PILOT CERTIFICATION COURSE

#### STUDENT FLIGHT RECORD

University of Dubuque / 2000 University Ave / Dubuque, IA 52001

#### AIR AGENCY CERTIFICATE NO. GV8S178Q

FTN#			
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Pilot's Legal Name			SODA
Pilot's Official Signature			
SSN	Data of B	irth	
Citizenship			
I certify that		_ has presented to me	e a
(Certified Birth Certificate or U.S. F	Passport), establishi	ng that(he	or she) is a U.S. citizen or
national in accordance with 49 CF	R 1552.3 (h).		
Instructor		Date	
Certificate No		Expires	
Permanent Address			
Street			
City, State, Zip			
Phone			
Home C	ell		
Date of Enrollment	Da	ate Completed	
	Date Issued	Expires	
Private Pilot Certificate No.		Date Issued	
	/	/	
Complex Endorsement Date		Instructor	
HP Endorsement Date		structor	
Graduation Record			
FAA Knowledge Test Date	;	Score	
End-of-course graduation Date	<del>-</del>	Result	
End-of-course Examiner		_	
Records certified complete and ac	ccurate:		
Name		Date	
Title			

PREVIOUS EXPERIENCE		
DUAL		SOLO
X-C SOLO		X-C-PIC
NIGHT DUAL		NIGHT SOLO
NIGHT LANDINGS		HOOD
FLIGHT TRAINING DEVICE		ACTUAL IFR
EVALUATION		
DATE		
FLIGHT / ORAL BY		_ TITLE
CREDIT GIVEN		
GROUND HOURS: Part 141	Part 61	HOURS AWARDED
FLIGHT HOURS: Part 141	Part 61	HOURS AWARDED
TERMINATION OF TRAINING		
DATE		
CERTIFIED BY		
CHIEF INSTRUCTOR		CERTIFICATE NO.
TRANSFERRED		
SCHOOL		
ADDRESS		
CITY	STATE	ZIP
TRANSFER DATE		
AIR AGENCY NO.		
COPY ISSUED TO STUDENT: DATE		BY

Lis	t of Effe	ctive Pages		<u>Page</u>	Revision	Revision Date	<u>Page</u>	Revision	Revision Date
	Th	is list of effect	ive pages shows the standing	<u>20</u>	Revision 3	6-6-2012	<u>62</u>	Revision 18	<u>9-15-2019</u>
of			us with regard to their revision	<u>21</u>	Revision 18	<u>9-15-2019</u>	<u>63</u>	Revision 16	<u>6-1-2018</u>
		•	ne page number, the revision	<u>22</u>	Revision 2	<u>1-9-2014</u>	<u>64</u>	Revision 18	9-15-2019
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110			n this syllabus will include a	<u>24</u>	Revision 16	<u>6-1-2018</u>	64b	Revision 14	6-1-2017
o b			•	<u>25</u>	Revision 18	<u>9-15-2019</u>	64c	Revision 14 Revision 14	6-1-2017 6-1-2017
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	_	ave been mad	le.	<u>27</u>	Revision 18	9-15-2019	<u>67</u>	Revision 14	6-1-2017 6-1-2017
<u>Th</u>	e Revisi	on Process		<u>28</u>	Revision 2	<u>1-9-2014</u>	68	Revision 1	<u>11-17-2005</u>
1.	Revise	the pages in	question.	<u>29</u>	Revision 18	<u>9-15-2019</u>	<u>69</u>	Revision 2	6-6-2012
2.	Make t	wo copies of	the revised pages.	<u>30</u>	Revision 2	<u>1-9-2014</u>	<u>70</u>	<u>Original</u>	<u>9-1-2002</u>
3.	Correc	t this "List of	Effective Pages " to reflect	<u>31</u>	Revision 18	<u>9-15-2019</u>	71	Original	9-1-2002
	the rev	ised pages.		<u>32</u>	Revision 18	9-15-2019	<u>72</u>	Revision 1	6-6-2012
4.	Make t	wo copies of	this corrected "List of	<u>33</u>	Revision 18	9-15-2019	<u>73</u>	Original	9-1-2002
	Effectiv	∕e Pages ".		<u>34</u>	Revision 18	<u>9-15-2019</u>	<u>74</u>	Revision 1	6-6-2012
5.		•	e local Flight Standards District	<u>35</u>	Revision 2	8-10-2009	<u>75</u>	Original	9-1-2002
0.		•	c local i light clandards District	<u>50</u>	Revision 18	9-15-2019	<u>76</u>	Original	9-1-2002
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6.			es in all syllabus copies when	<u>38</u>	Revision 18	9-15-2019	<u>78</u>	<u>Original</u>	9-1-2002
	approv	al is granted.		<u>39</u>	Revision 18	<u>9-15-2019</u>	<u>79</u>	<u>Original</u>	<u>9-1-2002</u>
	Page	Revision	Revision Date	<u>40</u>	Revision 1	<u>11-17-2005</u>	<u>80</u>	Revision 1	<u>6-6-2012</u>
	<u>1</u>	Original	9-1-2002	<u>41</u>	Revision 16	6-1-2018	<u>81</u>	Revision 1	<u>6-6-2012</u>
	<u>2</u>	Original	<u>9-1-2002</u>	<u>42</u>	Revision 2	<u>1-9-2012</u>			
	<u>3</u>	Revision 18	<u>9-15-2019</u>	<u>43</u>	Revision 1	<u>11-17-2005</u>			
	<u>4</u>	Revision 2	<u>1-9-2012</u>	<u>44</u>	Revision 18	<u>9-15-2019</u>			
	<u>5</u>	Revision 19	<u>5-13-2021</u>	<u>45</u>	Revision 18	<u>9-15-2019</u>			
	<u>6</u>	Revision 17	<u>6-1-2019</u>	<u>46</u>	Revision 18	<u>9-15-2019</u>			
	<u>7</u>	Revision 18	<u>9-15-2019</u>	<u>47</u>	Revision 18	<u>9-15-2019</u>			
	<u>7a</u>	Revision 19	<u>5-13-2021</u>	<u>48</u>	Revision 13	7-20-2015			
	<u>8</u>	Revision 17	<u>6-1-2019</u>	<u>49</u>	Revision 18	<u>9-15-2019</u>			
	<u>9</u>	Revision 18	<u>9-15-2019</u>	<u>50</u>	Revision 17	<u>11-17-2005</u>			
	<u>10</u>	Revision 1	<u>11-17-2005</u>	<u>51</u>	Revision 17	6-1-2019			
	<u> </u>	Revision 14	<u>6-1-2017</u>	<u>52</u>	Revision 16	6-1-2018			
	<u>12</u>	Revision 18	<u>9-15-2019</u>	<u>53</u>	Revision 16	<u>9-15-2019</u>			
	<u>13</u>	Revision 18	<u>9-15-2019</u>	<u>54</u> <u>55</u>	Revision 16 Revision 16	6-1-2018 6-1-2018			
	<u>14</u>	Revision 2	1-9-2014	<u>56</u>	Revision 18	<u>9-15-2019</u>			
	<u>15</u>	Revision 18	<u>9-15-2019</u>	<u>50</u>	Revision 16	<u>6-1-2018</u>			
	<u>16</u>	Revision 4	1-9-2014	<u>57</u> <u>58</u>	Revision 18	<u>9-15-2019</u>			
	<u>17</u>	Revision 18	<u>9-15-2019</u>	<u>59</u>	Revision 16	6-1-2018			
	<u>18</u>	Revision 3	<u>1-9-2014</u>	<u>60</u>	Revision 18	<u>9-15-2019</u>			
	<u>19</u>	Revision 18	<u>9-15-2019</u>	<u>61</u>	Revision 16	<u>6-1-2018</u>			
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#### TRAINING COURSE OUTLINE

#### **LOCATION**

The University of Dubuque, located at 2000 University Avenue, Dubuque, Iowa, 52001, holds Air Agency Certificate No. GV8S178Q. The University of Dubuque operates its pilot training school at the Dubuque Regional Airport, Dubuque, Iowa.

#### **COURSE TITLE**

Commercial Pilot Certification Course—Airplane Single-Engine Land

This Training Course Outline meets all the curriculum requirements for the Commercial Pilot Certification Course contained in Appendix D of Title 14 Code of Federal Regulation part 141 (14 CFR part 141). This syllabus contains separate flight training and ground training sections, which can be taught concurrently or separately.

#### **COURSE OBJECTIVE**

Students will gain the knowledge, skill and aeronautical experience necessary to meet the requirements for a Commercial Pilot Certificate; Airplane Single-Engine Land.

#### **COURSE COMPLETION STANDARDS**

To meet the course completion standards, students must demonstrate through knowledge, oral, flight tests, and appropriate records, that they meet the knowledge, skill and experience requirements necessary to acquire a Commercial Pilot Certificate, airplane category, single-engine land class rating. Students must complete the Instrument Rating prior to completing the Commercial Pilot Certification course.

#### MAIN OPERATIONS BASE

The Dubuque Regional Airport is the main operations base for training in this course. The airport has hard-surface runways and meets the requirements of 14 CFR 141.38 for day and night operations. Fuel services and maintenance services are available weekdays during normal working hours. Weekend and after hours fuel and maintenance are available on request.

#### MAIN OPERATIONS FACILITY

The school's primary flight facility is the Babka Flight Center, 10656 Airport Road, located at the Dubuque Regional Airport, Dubuque, lowa 52003. This building conforms to the requirements of 14 CFR 141.43 for briefing areas and 14 CFR 141.45 for ground training facilities. This permanent structure has 10 briefing areas of at least 6' by 7' and 14 additional office/training rooms with a maximum number of two students per area. Each briefing/training room will have communications capabilities for contacting a Flight Service Station. The building has Wi Fi capabilities for students and instructors to access weather and flight planning applications online.

#### **GROUND INSTRUCTIONAL FACILITIES**

The primary ground instructional facilities are in the Babka Flight Center, located at the Dubuque Regional Airport, Dubuque, Iowa 52003. This facility has three classrooms with a capacity of 24 students in each. The building and rooms are heated, lighted, and ventilated to conform to local building, sanitation, and health codes.

Based on enrollment and class formats, ground schools may also be conducted on the main campus of the University of Dubuque located at 2000 University Avenue, Dubuque, Iowa 52001. The University of Dubuque is accredited by the North Central Association of the Council for Higher Education. The University's classrooms meet the requirements of the Association and conform to local building, sanitation and health codes. Campus classrooms and computer labs are available in the Myers Library, Blades Hall, Alumni Hall, Dunlap Technology Center, MTAC, Mercer-Birmingham, and the University Science Center. Classrooms range in size from 142 seats in the Dunlap Technology Center to 6 seats in the Myers library.

#### **GROUND INSTRUCTIONAL EQUIPMENT / TRAINING AIDS**

Training aids and equipment used may include the following: Whiteboards, televisions, podium, LCD/Overhead projector with screen, laptop and/or desktop and/or tablet computers, computer/video interface units for TV/LCD projector. Other aids may include airplane models, airplane parts, instrument panel posters, aviation software, multiple aviation websites, E6B flight computer, plotter, navigation charts, Instrument Terminal Procedures, and EFB's. These aids and equipment will be kept accurate and current for the relevant course of training.

An Advanced Aviation Training device (AATD) may be used in this course as outlined in 14 CFR 141 and AC 61-136. An aircraft may be used to fulfill the instrument training requirement of those lessons if the training devices are not available or desired.

#### TRAINING DEVICES

The FRASCA Mentor, FRASCA RTD, Redbird SD, and an ALSIM AL250 are approved Advanced Aviation Training Devices that are available for training in accordance with their respective FAA Letter of Authorization.

#### **AIRCRAFT**

Cessna 172, Piper PA-28R and PA-44 aircraft are available for flight training.

For day, VFR, local area flights within 25 nautical miles of Dubuque regional Airport, or an approved satellite base, an airplane can be dispatched when it meets the requirements of 14 CFR 91.205 (a) (b) and has a serviceable communications radio.

For night, VFR, local area flight within 25 nautical miles of Dubuque Regional Airport or an approved satellite base, an airplane can be dispatched when it meets the requirements of 14 CFR 91.205 (a) (c), and has a serviceable communications radio, and a serviceable landing light.

For flights outside the local area, the airplane must meet the above requirements and also be equipped with at least one serviceable VOR navigational receiver or one panel mounted GPS receiver.

For IFR flights, the airplane must meet the above requirements for night VFR and the requirements of 14 CFR 91.205 (a) (d).

#### CHIEF AND ASSISTANT CHIEF INSTRUCTORS

The Chief Flight Instructor for the Commercial Pilot Airplane Certification Course is Ms. Suzanne Peterson certificate #2801778.

The Chief Ground Instructor for the Commercial Pilot Airplane Certification Course is Ms. Polly Kadolph certificate #3689827.

The following persons have been authorized as Assistant Chief Flight Instructors for the Commercial Pilot Course: Mr. Michael J. Glynn certificate #2883378, Mr. Robert Anthony (Tony) Foster certificate #3213651, Mr. Kyle F. Jones certificate #3755779, Mr. Jack D. Erickson certificate #3891398, and Mr. Ching-Kuan Su certificate #3540078.

#### **PERSONNEL**

The Chief Instructor for the Commercial Pilot Certification Course meets the requirements for Chief Instructor as listed in the 14 CFR 141.35 and has been approved by the local FAA Flight Standards District Office.

Flight Instructors will have a current Certified Flight Instructor, Airplane Single Engine Land—Instrument. All Flight Instructors will receive standardization training prior to teaching in this course. Additionally, Flight Instructors will receive annual flight standardization training. If a flight is conducted in the PA-44, the Flight Instructor conducting the dual flight will hold a current Multi-engine Flight Instructor rating and be standardized in the aircraft.

When course enrollments and individual availabilities warrant such appointments, the University of Dubuque will request the appointment of other key personnel such as; Assistant Chief Instructors, Check Instructors and Chief Ground Instructors. All requested appointees will meet the requirements of the appropriate sections of 14 CFR 141.35, Subpart B.

#### **ENROLLMENT PREREQUISITES**

Students must be able to write, read, speak, and understand the English language and possess a Private Pilot Certificate and at least a 3rd class medical certificate prior to enrolling in the flight portion of the Commercial Pilot Certification Course. The student must hold an instrument rating or be concurrently enrolled in an instrument rating airplane course and pass the required instrument rating practical test prior to completing the commercial pilot certification course.

#### **ENROLLMENT PROCEDURE**

Students will be required to show a certified birth certificate or a US passport establishing U.S. citizenship or nationality in accordance with 49 CFR 1552.3 (h). A copy of the proof of citizenship or nationality will be kept on file in the student's TCO. Alien flight students must apply online and be granted approval from TSA to begin flight training.

Upon enrollment in the flight portion of the training syllabus students will be issued a Certificate of Enrollment showing the date of enrollment and the course entered. Students will also receive a copy of the approved training syllabus. Students may enter the ground portion of the syllabus prior to or during the flight portion. Enrollment certificates and syllabi will be retained at UD Flight Operations at all times unless otherwise directed by the Chief Instructor. Students will have access to a copy of the University of Dubuque Student Flight Operations Manual which outlines the school's operational and safety procedures.

#### **CREDIT FOR PREVIOUS 14 CFR 141 PILOT TRAINING**

Flight credit may be transferred from other certificated schools to the University of Dubuque's flight program based on an oral test, flight check, written test, or any combination thereof. Students must arrange for the transmittal of flight records from the previous school to the University of Dubuque. The University will determine the amount of credit to be transferred. Credit will be entered in the student's training record along with the documents and tests on which the acceptance is based. The maximum credit given may be up to 50% of the University's approved curriculum requirements.

#### CREDIT FOR PREVIOUS 14 CFR 61 PILOT TRAINING

Flight credit may be transferred from 14 CFR 61 schools to the University of Dubuque's flight program based on an oral test, flight check, written test or any combination thereof. Students should submit a record of previous training from the school where it was received. The University will determine the amount of credit to be transferred. Credit will be entered in the student's training record along with the documents and tests on which the acceptance is based. The maximum credit given may be up to 25% of the University's approved curriculum requirements.

#### **GRADING SYSTEM FOR FLIGHT TRAINING**

#### **GRADE STANDARD**

- 3.....Meets Commercial Airman Certification Standards
- 2.....Meets Lesson Standards
- 1.....Needs Additional Training
- D.....Demonstration
- S.....Solo Flight

The above grading standard will be used to evaluate student performance. Grades will be entered on each lesson page. At the completion of each stage of training the students will be examined orally and by flight evaluation. Upon successful completion of the evaluation the student will proceed to the next stage of flight training.

#### **AIRPORTS USED**

Airports selected for cross-country use by a commercial student must be approved by a University flight instructor, considering the following:

- 1. 3000 ' recommended minimum runway length
- 2. Availability of 100LL aviation gasoline

Instructors must ensure that all airports used meet the requirements of Title 14 CFR Part 141.38 (b) (c) (d) (e) and (f).

#### MINIMUM COMMERCIAL PILOT FLIGHT TRAINING

	Dual	Solo/PIC	Night	Instrument or AATD*
STAGE 1 Cross-country	31	50	7	24
STAGE 2 Complex	11	0	0	1
STAGE 3 Maneuvers	13	15	0	0
TOTALS	55	65	7	25
TOTAL TCO		Day + Dual Night		
	Dual + Solo/PIC = 120 HOURS			120 HOURS

<sup>\*</sup> A maximum of 24 hours of AATD may be credited towards the 120 hour total time.

#### HOW TO USE THIS SYLLABUS

- 1. This syllabus was designed to be a reasonably complete list of the tasks required for the completion of each lesson. The list of tasks relieves the instructor of having to remember all the things that should be covered and rated in each lesson. At first, the number of tasks may seem daunting; however, they flow in a natural progression from start to finish and should cause little additional load on the instructor. Some tasks may be accompanied by italicized notes. These notes are additional memory aids for the instructor and student and check pilot.
- 2. At the top left of each lesson page is a block labeled "HOURS". There are three white blocks inside the black "HOURS" block. Each lesson allows for three flights or briefings. You should put the time for each flight or briefing in one of the white boxes. When a lesson is completed, that is, when every task in the lesson has a grade of "2" or better, the instructor should total up the time for the lesson and enter it at the bottom of the page in the cumulative times area.
- 3. Each task in a lesson has three blank lines to the left. These lines are for recording the rating of each task. Every task in a lesson must receive a rating of "2" or better before the lesson can be considered complete. If a lesson requires more than three flights or briefings to complete the lesson, the instructor will insert and use blank copies of the original lesson to record further flights or briefings, until the lesson is satisfactorily completed.
- 4. Lessons may require the instructor's and the student's signature, along with the date, airplane type, and airplane "N" number at the completion of each flight or briefing.
- 5. The cumulative times area at the bottom of each lesson is self-explanatory. It is the instructor's and the student's combined responsibility to make sure this area is accurately filled out, NOT at the conclusion of each flight or briefing, but at the conclusion of each lesson. Be sure to carry the "TOTAL" time for a finished lesson to the "PREVIOUS" time on the next lesson.
- 6. The "TIME" requirement at the top of each lesson is the time required for the student to stay "on track", time wise, throughout the syllabus. A lesson may be completed with somewhat less than the approximate time noted, but this time must then be made up in later lessons if the student is to finish the syllabus with the required amount of time, that is, 120 flight/FTD hours. Stage Checks have hours noted at the bottom of the cumulative time area. These hours are listed so instructors will know the approximate hours each student should have when they reach that lesson. Having more hours than required is not a problem. Having fewer hours than suggested is cause for the instructor to be aware of the situation and work to ensure that the student finishes the syllabus with the required number of hours. On reaching the last lesson, the required minimum hours are listed. If a student DOES NOT have these hours, or more, then they cannot be sent for a Rating Check. The instructor will have to continue with "review lessons" until the minimum time is met.
- 7. We will use the "read and do" system when doing checklists. All checklists denoted by a √, are to be read aloud by the student; and the checklist item being read, must be touched, as it is read, to confirm the item's correctness of position. This procedure instills consciousness of task and thoroughness in the student. If students do not "read and do" and touch the checklist items, they should be instructed to repeat the checklist.
- 8. All hold short lines are to be "called aloud" and "noted aloud" as to whether or not the airplane has permission to cross.

#### REVIEW LESSON PROCEDURE

During training, students may need to do additional work on lessons, or review past lessons. If an instructor needs additional lesson pages the instructor will:

- Copy a blank lesson page for the lesson concerned.
- Use the copied page to record the review or additional work.
- Write the word "Review" in a prominent place on the copied lesson page.
- Place the added lesson page(s) sequentially behind the original lesson page.

#### **ABBREVIATIONS**

acft	aircraft	inst	flight solely by reference to instruments while in
ADM	Aeronautical Decision Making		"Actual" or using a view limiting device
ACS	Airman Certification Standards	KOEL	Kinds of Operation Equipment List
l airspd	airspeed	LAHSO	Land and hold short operations
alt	altitude	LR	Lead Radial
approx	approximately	MAP	Missed Approach Point
ARROW	Airworthiness, Registration, Radio license	MDA	Minimum Descent Altitude
ARROW	(international), Operator's manual, Weight and	MEL	Minimum Equipment Lis
	balance	MLC	Modified Landing Checklist
ATC	Air Traffic Control	MRA	Manufacturer's Recommended Airspeed
CG	Center of gravity	Nav	navigation
CFIT	Controlled Flight Into Terrain	NTSB	National Transportation Safety Board
Comm	communication	obs	omni bearing selector
config	configuration	ops	operations
Cs	Constant speed	PMC	Pre-Maneuver checklist
СХ	correction	pre	before
DA	Decision Altitude	prep	preparation
		PT	Procedure Turn
DH	Decision Height	pwr	power
dist	distance	req	required
DME	Distance Measuring Equipment	SAIB	Special Airworthiness Information Bulletins
EFC	Expect Further Clearance	t/ls	take-offs and landings  Terminal Area Charts
equip	equipment	TACs	True Course
ETA	Estimated Time of Arrival	TC	
FAA	Federal Aviation Administration	VHF	Very High Frequency
FAF	Final Approach Fix	VR-IR	integrated flight training using visual and instrument reference
freq / freqs	frequency / frequencies	vol	volume
FSS	Flight Service Station	VOR	Very high frequency, Omni-directional, Radio range
FTD	Flight Training Device	Vx	best angle of climb
GPS	Global Positioning System	Vy	best rate of climb
hdg	heading	WACs	World Aeronautical Charts
hr	hour	xctry	cross country
IAF	Initial Approach Fix	xmitter	transmitter
IDs	Identifications	xwind	cross wind
	inoperative	<b>✓</b>	the aircraft checklist will be used
inop	Hoperative	•	

# COMMERCIAL PILOT CERTIFICATION Training Course Outline

#### STAGE ONE

**Cross-Country Flight Training** 

Lessons 1—14

#### 31 hours (approx) of Dual flight training

which includes:

24 hours (approx) of AATD training/Instrument training

10 hours minimum of instrument flight training as per Part 141 Appendix D, 4. (b) (1) (i)

At least 5 must be in an airplane

2 hours minimum of *day cross-country* flight as per Part 141 Appendix D, 4. (b) (1) (iii)

2 hours minimum of *night cross country* flight as per Part 141 Appendix D, 4. (b) (1) (iv)

#### 50 hours minimum of Solo\* and PIC\* flight training

which includes:

One solo cross-country flight (3 legs (1 leg 250 nm)) as per Part 141 Appendix D, 5. (a) (2) 5 hours of solo night VFR (10 t/ls to a full stop at an operating control tower) as per Part 141 Appendix D, 5. (a) (3)

#### Stage One Objectives

Students will plan and fly multiple dual, solo, and PIC cross-country flights to improve their aviation, navigation, and communication skills. Cross-country flights will be conducted VFR or IFR as regulations and conditions permit.

#### Stage One Completion Standards

This stage will be complete when the student meets all

lesson standards and satisfactorily performs the Stage One Check.

\*Note: A student must conduct one long solo cross-country flight which is necessary to fulfill the requirements of Part 141 Appendix D, 5. (a) (2) for , "One cross-country flight, with landings at a minimum of three points, and one segment of the flight consisting of a straight line distance of at least 250 nm...". Solo means the student must be the solo occupant of the aircraft. On all other cross-country flights, students may carry other aviation students enrolled at the University of Dubuque.

#### STAGE ONE—Lesson 1 Briefing

#### CROSS-COUNTRY FLYING AND NAVIGATION

**OBJECTIVE:** A review of all aspects of VFR and IFR cross-country flying and navigation.

TIME: As required.

PILOT ASSESSMENT		PART 91 AND 61 (cor	ntinued)
	Hypoxia, hyperventilation		Special VFR 91.157
	Dehydration, fatigue		VFR cruise altitudes 91.159
	Alcohol, drugs, carbon monoxide		VFR/IFR flight plans 91.169
	Ear/sinus, vertigo, motion sickness		Operation of nav lights 91.209
	Emotional, immature behavior		Instr/Equip Req 91.205
	High altitude operations		ELTs 91.207
	Oxygen requirements		Inop equipment 91.213
	Flight plan requirements	<u>AIRSPACE</u>	
WEATHER INFORMAT	<u>'ION</u>		Traffic patterns—entry, exit, altitudes
	Current weather charts		•
	Forecast weather charts		Class A, B, C, D, E, G airspace
	Winds aloft reports		TFRs, Special Use Areas (SUAs)
	METARs, TAFs		VFR/IFR cruising altitudes
	PIREPs, SIGMETs, AIRMETs		Land and Hold Short Operations
	TWEBs, HIWAS	<del></del>	Land and Hold Short Operations
PUBLICATIONS		THE AIRPLANE	
	Sectionals, TACs, IFR Enroute charts		ARROW
	FAR/AIM		POH Section 1—General
	Chart Supplement		POH Section 2—Limitations
	NOTAMs		POH Section 3—Emergency Procedures
DART OF AND OF			POH Section 4—Normal Procedure
PART 61 AND 91	Daview Dart C4		POH Section 5—Performance
	Review Part 61—currency, Commercial Pilot	<del></del>	POH Section 6—Weight & Balance/Equip List
	Pilot in command 91.3		POH Section 7—Systems (review all systems)
	Operating limitations 91.9		POH Section 8—Service
	Reckless ops 91.13	<del></del>	POH Section 9—Supplements
	Dropping objects 91.15		Airworthiness Directives, SAIBs
	Alcohol/Drugs 91.17		Inspections—Annuals/100 hrs-50 hrs/ Progressives
	Preflight actions 91.103		1 Togressives
	Seatbelts & harnesses 91.107	FLIGHT PLANNING	
	Near other acft 91.111		Finding runway lengths
	Right-of-way rules 91.113		Drawing the True Course
	Aircraft Speeds 91.117		Marking obstructions to flight
	Minimum altitudes 91.119		Measuring TC and mileage
	Altimeter setting 91.121		Flight log preparation
	Light gun signals 91.125		VOR navigation
	Fuel req 91.151		RNAV/GPS navigation
	Airspace 91.126-91.135		
	VFR minimums 91.155		

Hours	

# STAGE ONE—Lesson 1 <u>Briefing</u> CROSS-COUNTRY FLYING AND NAVIGATION

FLIGHT PLANNING (C	ontinued)	
	Dead reckoning	
	Pilotage	
	Performance charts	
	Fuel planning	
	Weight and balance	
	Go/No-go decisions	
	Alternate planning	
<u> </u>	Filing flight plans—VFR & IFR	
COMMUNICATIONS		
·	Flight Service Stations	
	Center—frequencies	
	Unicom, Multi-com	
	Emergency—121.5	
	Position reporting	
SPECIAL EMPHASIS		
	Aeronautical Decision Making (ADM)	
	Land and Hold Short Operations	
	Controlled Flight Into Terrain	
	RUNWAY INCURSION avoidance	
	Wake turbulence/Wind shear	
	Positive transfer of controls	
	Collision avoidance	
	Stall/Spin awareness	
	SRM	
COMPLETION STANDA	ARDS	
	olete when the student's knowledge of all items listed rates a grade of 2 or better.	
		B. (
Instructor	Student	Date

This Lesson Total

# STAGE ONE—Lesson 2 <u>Dual AATD or Aircraft</u> NAVIGATION REVIEW

**OBJECTIVE:** To review the student 's ability to navigate using VOR and RNAV/GPS.

**TIME**: 10 hours approximately; **Instrument.** 

PREFLIGHT BRIEFING	<u>.</u>			BASIC	MANEUVER	<u>s</u> (111)			
PREFLIGHT BRIEFING	Flight Deck Ma VOR position fi VOR radial inte VOR radial trace RNAV/GPS na	nding ercepting eking				_	Climbs— turn: el-off from climb Cruise light & level, level	turns	y, cruise),
<u>STARTUP</u>	✓ Engine :  Comm radio se  VOR setup—fre	etup—freq, vol,		RADIO	NAVIGATIOI	N (IR) VOF GPS Stati	ine checks  R position finding, S position finding, ion passage iden	tracking, in	tercepting
TAKEOFF/CLIMB	Takeoff clearar Takeoff—norm Traffic pattern of	nce—copy, con al, xwind, shori		BASIC	MANEUVER:	S (IR)  Leve Instr SID' STA		ırns, Cs, Cr nt —full panel —partial paı	
COMPLETION STANDA  The student will be able to Instructor  Dual Day	to perform all ma	Student	least Private Pilo ual Dual ust AATD		ACS and act Date  Solo Night	hieve a gi	Acft Type	r on each ta N #	Total

Stage 3 only

Lesson 9

only

#### STAGE ONE—Lesson 3 Dual Aircraft

CROSS-COUNTRY FLIGHT TRAINING ( 100 nm day X-Ctry ) FAR 141 Appendix D, 4b (iii)

**OBJECTIVE:** The student will plan and fly a day cross-country flight at least 2 hours in duration and have one leg of at least 100 nm between take off and landing.

TIME: 2 hours minimum.

PREFLIGHT BRIEFING		TAKEOFF (continued)	
	Discussion of this lesson		Takeoff—normal, xwind, short, soft
	Aeronautical Decision Making (ADM)		Traffic pattern departure
	LAHSO	BASIC MANEUVERS	
	CFIT		Oliveba Aurea On O.A. Maranian
	RUNWAY INCURSION avoidance		✓ Climbs— turns, Cs (Vx, Vy, cruise)
	Wake turbulence/wind shear		Level-off from climb procedure
	Positive transfer of controls		✓ Cruise
	Collision avoidance		Straight & level
	Stall/spin awareness		Turns to headings
	✓ Emergency Procedures (Briefing)		Engine checks/traffic checks
	Fire—startup, engine or electrical in-flight, cabin, wing	<u>NAVIGATION</u>	
	lcing—structural in-flight, static port blockage,		Open flight plan
	carb ice		Course intercepting, tracking—VOR/GPS
	Flap failure/landing—with flat tire		Pilotage, dead reckoning
	Electrical—over-voltage light, ammeter discharge		Ground speed calculation
PREFLIGHT	Charge		Navigation log completion
TREE EIGHT			Diversion and lost procedures
	Cockpit	✓ EMERGENCY P	ROCEDURES (Practical Review)
	Certificates & Documents—ARROW		Engine failure—takeoff run, after takeoff, in-
	✔ Preflight inspection		flight
	Airplane servicing		Forced landings—power, no power, ditching
<u>STARTUP</u>		BASIC MANEUVERS	
	✓ Engine start		<b>✓</b> Descent
	Comm radio setup—freq, vol, xmitter		Descents— turns, Cs
	VOR setup—freq, ID, set course		Level-off from descent—inst
	RNAV/GPS setup	<b>LANDING</b>	
<u>TAXI</u>			Approach—location, communication
	<b>✓</b> Taxi		Approach—tower, no tower
	Taxi clearance—copy, confirm, comply		Pattern entry
	Begin taxi—hazards, brake & steering check		✓ Landing
	Taxi—wind, speed, braking, hazards		Traffic pattern
	Call all HOLD SHORT lines		Landing clearance—copy, confirm, comply
	<b>✓</b> Runup		Stabilized approach
TAKEOFF			Flaps—all settings
	✓ Takeoff		Slips to landing
	Takeoff clearance—copy, confirm, comply		✓ Go arounds

Hours	

# STAGE ONE—Lesson 3 <u>Dual Aircraft</u> CROSS-COUNTRY FLIGHT TRAINING ( 100 nm day X-Ctry ) FAR 141 Appendix D, 4b (iii)

ANDING (co	ntinued)										
		Landings—	normal, cross	swind, short	, soft						
		Roundout-	-height, cross	swind correc	ction						
		Touchdowr	n—full stall, dı	rift, centerlin	ie						
		Rollout—w	vind, speed, br	aking, haza	ırds						
		Taxi cleara	ance—copy, co	onfirm, com	ply						
		<b>✓</b> Tax	(i								
		<b>✓</b> Shu	utdown								
OSTFLIGHT										1	
		Postflight in	nspection of a	ircraft		Cross-Cou	ntry Route			Dist	ance
		Close flight	t plan								
		Debrief/Up	date syllabus	and logbool	k	<u> </u>					
						<del></del> -					
	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total	Total Inst/AATD
Previous	•										
This Lesson											
Total											



#### STAGE ONE—Lesson 4 Dual AATD or Aircraft

#### **EMERGENCY AND INSTRUMENT REVIEW**

**OBJECTIVE:** Emergency procedures and instrument procedures will be reviewed.

TIME: 3 hours approximately. Instrument

PREFLIGHT BRIEFI	NG	BASIC MANEUVERS	
	Discussion of this lesson		✓ Climbs— turns, cruise climb
	LAHSO		Level-off from climb procedure
	CFIT		<b>✓</b> Cruise
	RUNWAY INCURSION avoidance		Straight & level
	Wake turbulence/wind shear		Turns to headings
	Positive transfer of controls		Engine checks/traffic checks
	Collision avoidance	NAVIGATION	
	Stall/spin awareness		Open flight plan
			Radio comm procedures
EMERGENCY PROC	CEDURES (ORAL REVIEW)		Course intercepting, tracking—VOR/GPS
	Fire—startup, engine or electrical in-flight,		Pilotage, Dead Reckoning
	cabin, wing		Ground speed calculation
	Icing—structural in-flight, static port blockage,		Navigation log completion
	_ carb ice		Diversion and lost procedures
	Flap failure/landing—with flat tire	<b>✓</b> <u>EMERGENCY F</u>	PROCEDURES (Practical Review)
	Electrical—over-voltage light, ammeter discharge		Engine failure—takeoff run, after takeoff, inflight
PREFLIGHT			Fire—startup, engine or electrical inflight,
	✓ Cockpit		cabin, wing  lcing—structural inflight, static port blockage,
	Certificates & Documents—ARROW		carb ice
STARTUP			Electrical—over-voltage light, ammeter discharge
	✓ Engine start	INSTRUMENT PRACT	ICE
	Comm radio setup—freq, vol, xmitter		Radar services—flight following
	•		Intercepting and tracking VOR radials
	VOR setup—freq, ID, set course		VOR approach
	_ RNAV/GPS setup		LOC approach
<u>TAKEOFF</u>			RNAV/GPS approach
	<b>✓</b> Takeoff		ILS approach
	Takeoff clearance—copy, confirm, comply		VOR holds—DME, intersection
	Takeoffs—normal, crosswind, short, soft		RNAV/GPS holds
	Pattern departure		Loss of navigation systems

Hours	

# STAGE ONE—Lesson 4 <u>Dual AATD or Aircraft</u> EMERGENCY AND INSTRUMENT REVIEW

BASIC MAN	<u>EUVERS</u>										
		<b>✓</b> Des	cents								
		Descents-	-turn, Cs, bes	t glide, eme	erg						
		Level-off from	om descent								
LANDING											
		Approach-	-location, con	nmunicatio	า						
		Approach-	-tower, no to	wer							
		<b>✓</b> Lan	ding								
		Landing cle	earance—cop	y, confirm,	comply						
		Stabilized a	approach								
		Taxi									
		<b>✓</b> Shu	ıtdown								
POSTFLIGH	<u>T</u>										
		Postflight in	nspection of a	ircraft							
		Debrief									
		Update syll	labus and log	book							
This lesson v			ne student car Student		l maneuvers		ilot ACS and Date		rade of 2 or be	etter on all t N#	asks.
						<del></del>					· · · · · · · · · · · · · · · · · · ·
	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/AATD
Previous											
This Lesson											
Total											
						Stage 3 only	Lesson 9 only				

#### STAGE ONE—Lesson 5 Dual Aircraft

#### **EMERGENCY AND INSTRUMENT PROCEDURES REVIEW**

**OBJECTIVE:** Emergency procedures and instrument procedures will be reviewed in the airplane.

**TIME**: 2 hours Instrument aircraft.

PREFLIGHT BRIEFING	1	<u>TAXI</u>	
	Discussion of this lesson		<b>✓</b> Taxi
	ADM and risk management		Taxi clearance—copy, confirm, comply
	LAHSO		Begin taxi—hazards, brake & steering check
	CFIT/Wire strike avoidance		Taxi—wind, speed, braking, hazards
	RUNWAY INCURSION avoidance		Call all HOLD SHORT lines
	Wake turbulence/wind shear avoidance		
	Checklist usage		<b>✓</b> Runup
·	Positive transfer of controls	<u>TAKEOFF</u>	
	TFRs and SUA		<b>✓</b> Takeoff
·	Collision avoidance		Takeoff clearance—copy, confirm, comply
<u></u>	Aviation security		Takeoffs—normal, crosswind, short, soft
<b>'</b>	Stall/spin awareness		Pattern departure
<u> </u>	SRM	BASIC MANEUVERS	(IR)
	OUDES (ODAL DEVIEW)		✓ Climbs— turns, cruise climb
EMERGENCY PROCE	DURES (ORAL REVIEW)		Level-off from climb procedure
	Fire—startup, engine or electrical in-flight, cabin, wing		<b>✓</b> Cruise
	lcing—structural in-flight, static port blockage, carb ice		Straight & level, turns to headings
			Unusual attitude recoveries
	Flap failure/landing—with flat tire		Engine checks/traffic checks
	Electrical malfunctions Emergency descent	EMERGENCY PROCEI	DURES (Practical Review)
PREFLIGHT	Emergency descent		Engine failure—takeoff run, after takeoff, inflight
	✓ Cockpit		Emergency descent
			Forced landings—power, no power
	Certificates & Documents—ARROW	INSTRUMENT PRACTI	<u>CE</u>
	✓ Preflight inspection		Radar services—flight following
	Airplane servicing		Intercepting and tracking VOR radials
STARTUP			VOR approach
	.4		LOC approach
	✓ Engine start		RNAV/GPS approach
	Comm radio setup—freq, vol, xmitter		ILS approach
l	VOR setup—freq, ID, set course		VOR holds—DME, intersection  RNAV/GPS holds
	RNAV/GPS setup		Loss of navigation systems
			Partial panel approach

Hours	

# STAGE ONE—Lesson 5 <u>Dual Aircraft</u> EMERGENCY AND INSTRUMENT PROCEDURES REVIEW

BASIC MANEUVER	<u>.s</u>									
	_ <b>v</b> Des	scents								
	Descents-	–turn, Cs								
	_ Level-off fr	om descent								
LANDING										
	Approach-	-location, cor	nmunicatio	n						
	_ Approach-	-tower, no to	wer							
	<b>✓</b> Lan	nding								
	 Landing cle	earance—cop	y, confirm,	comply						
	Stabilized									
	<b>✓</b> Shu	utdown								
POSTFLIGHT	_									
	Postflight in	nspection of a	aircraft							
	Debrief									
	_ Update syl	llabus and log	book							
COMPLETION STA	NDARDS									
This lesson will be co	omploto when th	ac atudant ca	n norform a	II manouwore	to Privato Pi	lot ACS and	schiovo a gr	rada of 2 or h	ottor on all t	ooke.
Instructor	ompiete when ti	Student car		II IIIaneuvers		Date		cft Type	etter on all t N#	
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										· • · · · · · · · · · · · · · · · · · ·
Dual	Dual	Dual	Dual	Dual	Solo	Solo	Solo/PIC	Total	Total	Total
Day		X-Ctry	Inst	AATD	Day	Night	X-Ctry	Solo/PIC	Acft	Inst/AATD
Previous										
This Lesson										
Total				+	+		†	1		

#### STAGE ONE—Lesson 6 Solo Aircraft

#### IFR OR VFR CROSS-COUNTRY FLIGHT TRAINING

**OBJECTIVE:** The student will plan and fly cross-country flights; one shall include landings at 3 different points and have a *straight-line distance of 250+ nm between two points*.

**TIME**: 15 hours approximately.

PREFLIGHT BRIEFING	(student briefs instructor)	<u>TAKEOFF</u>	
	Discussion of this lesson		✓ Takeoff
	Aeronautical Decision Making (ADM)		Takeoff clearance—copy, confirm, comply
	LAHSO		Takeoffs—normal, crosswind, short, soft
	CFIT		
	RUNWAY INCURSION avoidance		Climbs—with turns, Cs (Vx, Vy, cruise)
	Wake turbulence/wind shear		Pattern departure
	Collision avoidance	BASIC MANEUVERS	
	Stall/spin awareness		Level-off from climb procedure
EMERGENCY PROCE	DURES (ORAL REVIEW)		<b>✓</b> Cruise
	Engine failure—takeoff run, after takeoff, in-		Straight & level
	flight		Turns to headings
	Forced landing—power, no power, ditching		Engine checks/traffic checks
	Fire—startup, engine or electrical in-flight, cabin, wing	<u>NAVIGATION</u>	
	Icing—structural in-flight, static port blockage,		Open flight plan
	carb ice		Course intercepting, tracking—VOR/GPS
	Landing with flat tire		Pilotage, Dead Reckoning
	Electrical—over-voltage light, ammeter discharge		Ground speed calculation
	Flap failure		Navigation log completion
PREFLIGHT	Trap failure		Diversion and lost procedures
I KEI LIOITI		BASIC MANEUVERS	
	Cockpit		<b>✓</b> Descents
	Certificates & Documents—ARROW		Descents—turn, Cs, best glide, emerg
	✓ Preflight inspection		Level-off from descent
	Airplane servicing	LANDING	
STARTUP			Approach—location, communication
	✓ Engine start		Approach—tower, no tower
	Engine start		Pattern entry
	Comm radio setup—freq, vol, xmitter		
<b> </b>	VOR, RNAV/GPS setup—freq, ID, set course		Landing
TAXI			Traffic pattern
	<b>✓</b> Taxi		Landing clearance—copy, confirm, comply
			Stabilized approach
	Taxi clearance—copy, confirm, comply		Flaps—all settings
	Begin taxi—hazards, brake & steering check		Slips to landing
	Taxi—wind, speed, braking, hazards		✓ Go arounds
	Call all HOLD SHORT lines		Landings—normal, crosswind, short, soft
	Runup		Roundout—height, crosswind correction

Hours	

# STAGE ONE—Lesson 6 <u>Solo Aircraft</u> IFR OR VFR CROSS-COUNTRY FLIGHT TRAINING

LAINDING (C	continued)										
		Touchdown	—full stall, dri	ift, centerline	Э						
		Rollout—wir	nd, speed, bra	aking, hazar	ds						
		Taxi clearar	псе—сору, со	onfirm, comp	oly						
		<b>✓</b> Taxi									
		✓ Shute	down								
POSTFLIGH	 I										
		Postflight in	spection of ai	ircraft							
		Close flight	plan								
		Dual debrief	f								
		Update sylla	abus and logb	ook							
		Cross-counf	try Summary	Sheet comp	leted						
COMPLETIO	N STANDA	\RDS									
										-11.4	
This lesson w Instructor	ill be comp	lete when the	e student can Student		maneuvers		ilot ACS and Date		ade of 2 or be oft Type	tter on all to N #	asks.
IIIStructor			Student				Date	Δ,	oit Type	IN #	
				<del></del>	<del></del>						
			-								
					<del></del>						
	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/AATD
Previous											Total Inst/AATD
Previous											Total Inst/AATD
											Total Inst/AATD
Previous This Lesson											Total Inst/AATD
This Lesson											Total Inst/AATD
This											Total Inst/AATD



#### STAGE ONE—Lesson 7 Dual Aircraft

#### DAY/NIGHT CROSS-COUNTRY FLIGHT TRAINING

**OBJECTIVE:** The student will plan and fly day or night cross-country flights with an emphasis on instrument flight and approaches.

TIME: 5 hours approximately, including a minimum of 3 hours instrument.

PREFLIGHT BRIEFING		TAKEOFF	
	Discussion of this lesson		<b>✓</b> Takeoff
	Review POH emergency procedures		rakoon
	ADM and risk management		Takeoff clearance—copy, confirm, comply
	LAHSO		Takeoffs—normal, crosswind, short, soft
	CFIT/Wire strike avoidance		Pattern departure
	TFRs and SUA	BASIC MANEUVERS	(VR and IR)
	RUNWAY INCURSION avoidance		✓ Climbs—with turns, cruise climb
	Wake turbulence/wind shear avoidance		•
	Checklist usage		Level-off from climb procedure
	Collision avoidance		<b>✓</b> Cruise
	Aviation security		Straight & level
	Stall/spin awareness		Turns to headings
	SRM	NAVIGATION (VR and	HIR)
EMERGENCY PROCED	OURES (oral review)		Open flight plan
	Forced landing—power, no power, ditching		VOR Course intercepting, tracking
	Fire—startup, engine or electrical inflight,		GPS Course intercepting, tracking
	cabin, wing		Pilotage, Dead Reckoning
	lcing—structural inflight, static port blockage, carb ice		Diversion and lost procedures
	Electrical malfunctions	APPROACHES (IR)	
	Emergency descent	<del></del>	ILS
PREFLIGHT		<del></del>	LOC
	✓ Cockpit		BC (optional)
	Coonpil		VOR
	Certificates & Documents—ARROW		GPS
	✔ Preflight inspection		Partial panel
	Airplane servicing		
<u>STARTUP</u>			
	✓ Engine start		
	Comm radio setup—freq, vol, xmitter		
	VOR, RNAV/GPS setup—freq, ID, set course		
TAXI			
	<b>✓</b> Taxi		
	Taxi clearance—copy, confirm, comply		
	Call all HOLD SHORT lines		
	<b>✓</b> Runup		

Hours	

# STAGE ONE—Lesson 7 <u>Dual Aircraft</u> DAY OR NIGHT CROSS-COUNTRY FLIGHT TRAINING

LANDING						POSTE	LIGHT				
		Approach—	location, com	ımunication	ı			_ Postflig	ht inspection	of aircraft	
			tower, no tow					_ Close fl	light plan		
		Pattern entr						_ Debrief			
								_ Update	syllabus and	logbook	
		Traffic patte									
			arance—copy	/, confirm, c	ютпріу						
		Stabilized a	рргоасті								
		<b>✓</b> Go a	arounds								
		Landings—	normal, cross	wind, short,	, soft						
		Roundout—	-height, cross	wind correc	tion						
		Touchdown	—full stall, dri	ift, centerlin	e						
			nd, speed, bra								
		Taxi clearar	псе—сору, со	onfirm, comp	ply						
		<b>✓</b> Taxi									
		Taxi—wind,	speed, brakii	ng, hazards	<b>;</b>						
				J							
		▼ Silut	down								
This lesson w			e student can Student		l maneuvers		ilot ACS and a		rade of 2 or be	etter on all t N#	
											<del></del>
						<del></del>					
					<del></del>						<del></del>
	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/AATD
Previous											
										ı	
This							+				+
Lesson										İ	
Total							+				+
Total										ı	
			i l								

#### STAGE ONE—Lesson 8 Dual Aircraft

NIGHT CROSS-COUNTRY FLIGHT TRAINING (100 nm night X-Ctry ) FAR 141 App D, 4b (iv))

**OBJECTIVE:** The student will plan and fly night cross-country flights; one of which will be at least 2 hours in duration and have **one leg of at least 100 nm between points** on the flight.

TIME: 2 hours minimum.

PREFLIGHT BRIEFING	1	TAXI	
	Discussion of this lesson		
	ADM and risk management		<b>✓</b> Taxi
	LAHSO		Taxi clearance—copy, confirm, comply
	CFIT/Wire strike avoidance		Begin taxi—hazards, brake & steering check
	RUNWAY INCURSION avoidance		Taxi—wind, speed, braking, hazards
	Wake turbulence/wind shear avoidance		Call all HOLD SHORT lines
	Checklist usage		
	Positive transfer of controls		<b>✓</b> Runup
	TFRs and SUA	TAKEOFF	
	Collision avoidance		✓ Takeoff
	Aviation security		
	Stall/spin awareness		Takeoff clearance—copy, confirm, comply
	SRM		Takeoffs—normal, crosswind, short, soft
EMERGENCY PROCE	DURES (ORAL REVIEW)		Pattern departure
	Engine failure—takeoff run, after takeoff, inflight	BASIC MANEUVERS	✓ Climbs—with turns, cruise climb
	Forced landing—power, no power, ditching		,
	Fire—startup, engine or electrical in-flight, cabin, wing		Level-off from climb procedure  ✓ Cruise
	lcing—structural in-flight, static port blockage, carb ice		Straight & level
	Landing with flat tire		Turns to headings
	Electrical malfunctions		Engine checks/traffic checks
	Emergency descent	NAVIGATION	
	Flap failure		Open flight plan
<u>PREFLIGHT</u>			Course intercepting, tracking—VOR/GPS
	✓ Cockpit		Pilotage, Dead Reckoning
	Certificates & Documents—ARROW		Ground speed calculation
	✔ Preflight inspection		Navigation log completion
	Airplane servicing		Diversion and lost procedures
STARTUP	All plane servicing	BASIC MANEUVERS	
	✓ Engine start		<b>✓</b> Descent
	Comm radio setup—freq, vol, xmitter		Descents—turn, Cs
	VOR, RNAV/GPS setup—freq, ID, set course		Level-offs from descents

Hours	

# STAGE ONE—Lesson 8 <u>Dual Aircraft</u> NIGHT CROSS-COUNTRY FLIGHT TRAINING (100 nm night X-Ctry ) FAR 141 App D, 4b (iv))

LANDING		POSTFLIGHT		
	Approach—location, communication		Postflight inspection of airc	craft
	Approach—tower, no tower		Close flight plan	
	Pattern entry		Debrief	
	<b>✓</b> Landing		Update syllabus and logbo	ook
	Traffic pattern			
	Landing clearance—copy, confirm, comply	Cross-Country Route		Distance
	Stabilized approach			
	Flaps—all settings			
	✓ Go arounds			
	Landings—normal, crosswind, short, soft			
	Roundout—height, crosswind correction			
	Touchdown—full stall, drift, centerline			
	Rollout—wind, speed, braking, hazards			
	Taxi clearance—copy, confirm, comply			
	<b>✓</b> Taxi			
	Taxi—wind, speed, braking, hazards			
	<b>✓</b> Shutdown			
COMPLETION STANDA	ARDS			
This lesson will be comp	plete when the student can perform all maneuvers	to Private Pilot ACS and ach	ieve a grade of 2 or better o	n all tasks.
Instructor	Student	Date	Acft Type	N #
	<del></del>	<del></del>		
		<del></del>		

	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/AATD
Previous											
This Lesson											
Total											
						Stage 3 only	Lesson 9 only				

#### STAGE ONE—Lesson 9 Solo Aircraft

#### VFR LOCAL NIGHT FLIGHTS WITH TAKEOFFS AND LANDINGS

**OBJECTIVE:** The student will perform a minimum of 10 takeoffs and landings in the traffic pattern at an airport with an **operating control tower**.

TIME: 5 hours.

PREFLIGHT BRIEFING	(student briefs instructor)	BASIC MANEUVERS	
	Discussion of this lesson		✓ Descent
	Wake turbulence/wind shear		
	Collision avoidance		Descents—turn, Cs
	Night vision and illusions		Level-offs from descents
	Pilot equipment	LANDING	
	Aircraft and airport lighting systems		
	Weather planning		Approach—location, communication
	Review of emergency procedures		Approach—tower, no tower
	ADM, LAHSO, CFIT		Pattern entry
PREFLIGHT			✓ Landing
	✓ Cockpit		Traffic pattern
	Certificates & Documents—ARROW		Landing clearance—copy, confirm, comply
	✔ Preflight inspection		Stabilized approach
	Airplane servicing		Flaps—all settings
STARTUP			Slips to landing
	✓ Engine start		✓ Go arounds
	Comm radio setup—freq, vol, xmitter		
	VOR, RNAV/GPS setup—freq, ID, set course		Landings—normal, crosswind, short, soft
TAXI			Roundout—height, crosswind correction
			Touchdown—full stall, drift, centerline
	<b>✓</b> Taxi		Rollout—wind, speed, braking, hazards
	Taxi clearance—copy, confirm, comply		
	Begin taxi—hazards, brake & steering check		Taxi clearance—copy, confirm, comply
	Taxi—wind, speed, braking, hazards		<b>✓</b> Taxi
	Call all HOLD SHORT lines		
	<b>✓</b> Runup		Taxi—wind, speed, braking, hazards
TAKEOFF			<b>✓</b> Shutdown
	<b>✓</b> Takeoff	<u>POSTFLIGHT</u>	
	Takeoff clearance—copy, confirm, comply		Postflight inspection of aircraft
	Takeoffs—normal, crosswind, short, soft		Dual debrief
	. s.		Update syllabus and logbook
	Pattern departure		Number of takeoffs and landings at a tower controlled field

	Hours	

# STAGE ONE—Lesson 9 <u>Solo Aircraft</u> VFR LOCAL NIGHT WITH TAKEOFFS AND LANDINGS

Airports Used	

#### **COMPLETION STANDARDS**

This lesson will be complete when the stu	udent can perform all maneuvers to Private I	Pilot ACS and achieve a	grade of 2 or better or	n all tasks.
Instructor	Student	Date	Acft Type	N #

	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/AATD
Previous											
This Lesson											
Total											
						Stage 3 only	Lesson 9 only				

#### STAGE ONE—Lesson 10 Solo or PIC Aircraft

#### IFR OR VFR CROSS-COUNTRY FLIGHT TRAINING

**OBJECTIVE:** The student will refine cross-country piloting skills.

**TIME**: 20 hours approximately.

PREFLIGHT BRIE	FING (student briefs instructor)	<u>TAKEOFF</u>	
	Discussion of this lesson		✓ Takeoff
	ADM		Takeoff clearance—copy, confirm, comply
	LAHSO		Takeoffs—normal, crosswind, short, soft
	CFIT		Pattern departure
	RUNWAY INCURSION avoidance	BASIC MANEUVERS	r attern departure
	Wake turbulence/wind shear	BAGIO MARLOVERO	Level-off from climb procedure
	Collision avoidance		,
	Stall/spin awareness		✓ Cruise
EMEDGENCY DDO	OCEDURES (ORAL REVIEW)		Straight & level
LIVILINGEINOT FIN			Turns to headings
	Engine failure—takeoff run, after takeoff, inflight		Engine checks/traffic checks
	Forced landing—power, no power, ditching	<u>NAVIGATION</u>	
	Fire—startup, engine or electrical in-flight,		Open flight plan
	cabin, wing		Course intercepting, tracking—VOR/GPS
	lcing—structural in-flight, static port blockage,		Radar services
	carb ice		Pilotage, Dead Reckoning
	Landing with flat tire		Navigation log completion
	Electrical—over-voltage light, ammeter discharge		Diversion and lost procedures
	Flap failure	BASIC MANEUVERS	
PREFLIGHT			<b>✓</b> Descent
	4 0 1 11		Descents—turn, Cs
	Cockpit		Level-offs from descents
	Certificates & Documents—ARROW	LANDING	
	✔ Preflight inspection	<u>LANDINO</u>	Ammanah Jasatian asamunisatian
	Airplane servicing		Approach—location, communication
STARTUP			Approach—tower, no tower
			Pattern entry
			✓ Landing
	Comm radio setup—freq, vol, xmitter		Traffic pattern
	VOR, RNAV/GPS setup—freq, ID, course		Landing clearance—copy, confirm, comply
TAXI			Stabilized approach
	M Tavi		Flaps—all settings
			Slips to landing
	Taxi clearance—copy, confirm, comply		
	Begin taxi—hazards, brake & steering check		✓ Go arounds
	Taxi—wind, speed, braking, hazards		Landings—normal, crosswind, short, soft
<del></del>	Call all HOLD SHORT lines		Roundout—height, crosswind correction
	<b>✓</b> Runup		

Hours	

# STAGE ONE—Lesson 10 <u>Solo or PIC Aircraft</u> IFR OR VFR CROSS-COUNTRY FLIGHT TRAINING

LANDING (0	continued)											
		Touchdown	ı—full stall, dr	ift, centerlin	ie							
		Rollout—wi	nd, speed, bra	aking, haza	rds							
		Taxi clearar	nce—copy, co	onfirm, com	ply							
		<b>✓</b> Taxi										
		Taxi—wind,	, speed, braki	ing, hazards	;							
		<b>✓</b> Shut	tdown									
POSTFLIGHT	<u>T</u>											
		Postflight in	spection of ai	ircraft								
		Close flight	plan									
		Debrief										
		Update sylla	abus and logb	oook								
		Cross-coun	try Summary	Sheet com	pleted							
COMPLETIO	N STAND	ARDS										
Instructor	Will be com	piete whom an	Student		- Illianeuvele	rs to Private Pilot ACS and achieve achieve and achieve and achieve achieve and achieve achieve achieve achieve achieve and achieve achiev			Acft Type N #			
	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total	Total Inst/AATD	
Previous	,											
Fievious-												
This		<u> </u>			<u> </u>	<u> </u>	<del> </del>				_	
Lesson												
Total											+	
Total												

Hours	

#### STAGE ONE—Lesson 11 Dual AATD or Aircraft

#### INSTRUMENT AND NAVIGATION REVIEW

**OBJECTIVE:** The student will refine navigation skills under the instructor 's supervision.

TIME: 6 hours approximately. Instrument

PREFLIGHT BRIEFING					BASIC	BASIC MANEUVERS (continued)								
	Crew Reso	urce Manage	ment				<b>✓</b>	Cruise						
	VOR/GPS	navigation					_		ıt.					
STARTUP														
	<b>✓</b> En	aino etert												
		gine start		_	HOLDING PROCEDURE									
		o setup—fred		er	HOLDI	NO FROOLD	LOC			asks.				
	RNAV/GPS	—freq, ID, se	et course				_	Cruise raight & level—inst evel turns—standard rate, inst nusual attitude recovery—inst  OC DR, DME, GPS IES TARS DR NAV/GPS OC DC/BC (optional) S ess of navigation systems artial panel approach  ebrief odate syllabus and logbook  a grade of 2 or better on all tasks.  Acft Type  N #						
	KNAV/GF3	s setup						DIVIE, GPS						
TAKEOFF					INSTRUMENT APPROACHES									
	SID's, ODF	o's			STARS									
	<b>✓</b> Ta	keoff				VOR								
	Takeoff cle	arance—cop	y, confirm, o	comply			_	GPS						
	Takeoffs—	normal, cross	swind, short	, soft			_ LOC							
	Pattern der	parture												
BASIC MANEUVERS						ILS								
	.4													
		nbs—turns, C		ruise), inst		POSTFLIGHT								
	Level-off from	om climb—ins	st		POSTE									
							Debrief							
							_ Update	syllabus and	l logbook					
COMPLETION STAND	ARDS													
This lesson will be com	plete when th	e student car	n perform al	l maneuvers	to Private P	ilot ACS and a	achieve a gr	ade of 2 or be	etter on all t	asks.				
Instructor		Student				Date								
							,·							
										<del></del>				
									<del></del>	<del></del>				
Dual	Dual	Dual	Dual	Dual	Solo	Solo	Solo/PIC	Total	Total	Total				
Day	Night	X-Ctry	Inst	AATD	Day	Night	X-Ctry	Solo/PIC	Actt	Inst/AATD				
Previous														
This														
Lesson														
Total														
				1	Stage 3	Lesson 9								
					only	only								

#### STAGE ONE—Lesson 12 Solo or PIC Aircraft

#### IFR OR VFR CROSS-COUNTRY FLIGHT TRAINING

**OBJECTIVE:** The student will plan and fly cross-country flights to gain flight experience.

**TIME**: 10 hours approximately.

PREFLIGHT BRIEFING	(student briefs instructor)	TAXI	
	Discussion of this lesson		✓ Taxi
	Review POH emergency procedures		· IdA
	ADM and risk management		Taxi clearance—copy, confirm, comply
	LAHSO		Begin taxi—hazards, brake & steering check
	CFIT/Wire strike avoidance		Taxi—wind, speed, braking, hazards
	RUNWAY INCURSION avoidance		Call all HOLD SHORT lines
	Wake turbulence/wind shear avoidance		<b>✓</b> Runup
	Checklist usage	TAKEOFF	
	Positive transfer of controls	- TAKEOTT	
	TFRs and SUA		<b>✓</b> Takeoff
	Collision avoidance		Takeoff clearance—copy, confirm, comply
	Aviation security		Takeoffs—normal, crosswind, short, soft
	Stall/spin awareness		Pattern departure
	SRM	BASIC MANEUVERS	
	✓ Emergency Procedures (Oral review)		✓ Climbs—turns, Cs (Vx, Vy, cruise), inst
	Engine failure—takeoff run, after takeoff, inflight		Level-off from climb procedure
	Emergency descent		<b>✓</b> Cruise
	Forced landing—power/no power, ditching		Straight & level
	lcing—structural in-flight, static port blockage, carb ice		Turns to headings
	Flap failure/landing with flat tire		Engine checks/traffic checks
		NAVIGATION	
	Electrical—over-voltage light, ammeter discharge		Open flight plan
PREFLIGHT			Course intercepting, tracking—VOR/GPS
			Pilotage, Dead Reckoning
	✓ Cockpit		Ground speed calculation
	Certificates & Documents—ARROW		Navigation log completion
	✓ Preflight inspection		Diversion and lost procedures
	Airplane servicing	DACIO MANIELIVIEDO	
	/ implante delivioling	BASIC MANEUVERS	
STARTUP			<b>✓</b> Descents
	✓ Engine start		Descents—turns, Cs
	Comm radio setup—freq, vol, xmitter		Level-off from descent—inst
	VOR setup—freq, ID, set course		
	RNAV/GPS setup		

Hours	

# STAGE ONE—Lesson 12 <u>Solo or PIC Aircraft</u> IFR OR VFR CROSS-COUNTRY FLIGHT TRAINING

LANDING					POST	FLIGHT				
	Approach—	-location, con	nmunication	1			Postfli	ght inspection	of aircraft	
	Approach—	-tower, no tov	ver				Close	flight plan		
	Pattern ent	ry					Dual d	ebrief		
	<b>✓</b> Lan	ding					<del></del>	syllabus and	l logbook	
	Traffic patte	ern						country Sumn		completed
	Landing cle	earance—cop	y, confirm,	comply				ocurrary Curran	ilary cricor	Completed
	Stabilized a	approach								
	Flaps—all s	settings								
	Slips to lan	ding								
	✓ Go a	arounds								
	Landings—	normal, cross	swind, short	, soft						
	Roundout-	-height, cross	wind correct	ction						
	Touchdowr	n—full stall, dr	ift, centerlir	ne						
		ind, speed, br								
	Taxi cleara	nce—copy, co	onfirm, com	ply						
	_ ✓ Taxi	i								
	Taxi—wind	, speed, braki	ng, hazard	S						
	<b>✓</b> Shu	tdown								
COMPLETION STAN	DARDS									
This lesson will be co	mnlete when th	ne student car	nerform al	l maneuvers	to Private F	Pilot ACS and	achieve a gr	ade of 2 or be	etter on all t	aeke
Instructor	impiete when t	Student		i mancavero	to i iivato i	Date		cft Type	N #	
		<del></del>			<del></del>					<del></del>
										<del> </del>
		_								<del> </del>
Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/AATD
Previous										
This										
Lesson										
Total										
					Stage 3	Lesson 9				
					only	only				

#### STAGE ONE—Cross-Country Summary Sheet

LESSON 6-SOLO CROSS (	COUNTRY FLIGHTS (15 Hrs. Approximately)					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route					Solo	PIC
Date	Pilot Signature					
Route	Distance					
Date	Pilot Signature					
LESSON 10—SOLO/PIC CR	OSS COUNTRY FLIGHTS (20 Hrs. Approxim	ately)				
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
ESSON 12—SOLO/PIC CR	OSS COUNTRY FLIGHTS (10 Hrs. Approxim	ately)				
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					
Route	Distance	Time	VFR	IFR	Solo	PIC
Date	Pilot Signature					

#### STAGE ONE—Lesson 13

### **CROSS-COUNTRY ORAL REVIEW**

**OBJECTIVE:** The student will demonstrate practical knowledge of areas of cross-country flight at the commercial pilot level.

**TIME**: As required.

PILOT ASSESSMENT		PART 61 AND 91 (co.	ntinued)
	Hypoxia, hyperventilation		Airspace 91.126—91.135
	Dehydration, fatigue		VFR minimums 91.155
	Alcohol, drugs, carbon monoxide		Special VFR 91.157
	Ear/sinus, vertigo, motion sickness		VFR cruise altitudes 91.159
	Emotional immature behavior		VFR flight plans 91.153
	High altitude operations		Operation of nav lights 91.209
	Oxygen requirements		Instr/equipment requirements 91.205
	Flight plan requirements		ELTs 91.207
WEATHER INFORMAT	TION		Inop equipment 91.213
	Current weather charts		mop equipment e n.z.re
	Forecast weather charts		Review Part 91 IFR regulations
	Winds aloft reports	AIRSPACE	
	METARs, TAFs		Traffic patterns—entry, exit, altitudes
ı	PIREPs, SIGMETs, AIRMETs		·
	TWEBs, HIWAS		Class A, B, C, D, E, G airspace
PUBLICATIONS	,		TFRs, Special Use Areas (SUAs)
	Sectionals, WACs, TACs, IFR enroute charts		VFR/IFR cruising altitudes
	FAR/AIM		LAHSO
	Chart Supplement	THE AIRPLANE	
·	NOTAMs		ARROW
PART 61 AND 91			General
	Review part 61—currency, Commercial Pilot		Limitations
	Pilot in command 91.3		
	Operating limitations 91.9		Emergency procedures
	Reckless ops 91.13		Normal procedures
	Dropping objects 91.15		Performance
	•		Weight and balance/equip list
	Alcohol/Drugs 91.17 Preflight actions 91.103		Airworthiness Directives, SAIBs
	Seatbelts & harnesses 91.107		Inspections—Annuals/100s/50s/Progressives
	Near other aircraft 91.111	SYSTEMS	
	Right-of-way rules 91.113		Ignition system
	Aircraft speeds 91.117		
	Minimum altitudes 91.119		Electrical system
	Altimeter setting 91.121		Cabin and carb heat systems
	Light gun signals 91.125		Fuel system

Hours	STAGE ONE—Lesson 13
	CROSS-COUNTRY ORAL REVIEW

FLIGHT PLANNING			СОММ	JNICATIONS	
	Finding runway lengths				Flight service stations
	Drawing the TC				Center—frequencies
	Marking obstructions to flight				Unicom, Multicom
	Measuring TC and mileage				Emergency—121.5
	Flight log preparation				Position reporting
	VOR navigation		SPECIA	L EMPHASIS	
	RNAV/GPS navigation				ADM
	Dead reckoning				LAHSO
	Pilotage				CFIT
	Performance charts				Runway incursion avoidance
	Fuel planning				
	Weight and balance				Wake turbulence/wind shear
	Go/no-go decisions				Positive transfer of controls
	Alternate planning				Collision avoidance
	Filing flight plans—VFR				Stall/spin awareness
COMPLETION STANDA	ARDS				
This lesson will be comp	plete when the student's knowledge	of all items listed ra	ates a gra	ade of 2 or bette	r.
Instructor	S	tudent			Date
					<del></del>

### STAGE ONE—Lesson 14 Dual Aircraftt

#### **CROSS-COUNTRY STAGE CHECK**

OBJECTIVE: The student will demonstrate the ability to plan and fly cross-country at flights at

the commercial pilot level. **TIME**: 1 hour approximately.

CROSS COUNTRY	ORAL BRIEFING	BASIC MANEUVERS	
CROSS COUNTRY	Discussion of this lesson  Weather/flight planning and filing  Notams/Chart Supplement  ADM and risk management  Performance  Weight and balance  Flight log  Chart interpretation  Airspace/TFRs and SUA	NAVIGATION	<ul> <li>✓ Climbs—with turn, Cs (Vx, Vy, cruise)</li> <li>Level-off from climb</li> <li>✓ Cruise</li> <li>Engine check/traffic check</li> <li>Open flight plan</li> <li>Communication procedures</li> <li>VOR Course intercepting, tracking</li> </ul>
PREFLIGHT	_ FARs _ Emergency procedures  ✓ Cockpit—ARROW  ✓ Preflight inspection		GPS Course intercepting, tracking Station passage recognition Lost procedures Loss of navigation systems Pilotage/dead reckoning Groundspeed calculation Navigation log completion
STARTUP	Airplane servicing ✔ Engine start	EMERGENCY PROCE	In-flight radio resources Diversion  DURES
	Comm radio setup—freq, vol, xmitter  VOR setup—freq, ID, set course  RNAV/GPS setup		Engine failure—takeoff run, after takeoff, in- flight Forced landings—power, no power Emergency descent
<u>TAXI</u>	_	BASIC MANEUVERS	✓ Descents  Descents—turns, Cs  Level-offs from descents
	<ul> <li>Runway incursion avoidance</li> <li>Begin taxi—hazards, brake &amp; steering check</li> <li>Taxi—wind, speed, braking, hazards</li> <li>Call all HOLD SHORT lines</li> <li>✓ Runup</li> </ul>	LANDING	Approach—location, communications Approach to airport—tower, no tower Pattern entry
<u>TAKEOFF</u>	<ul><li>✓ Takeoff</li><li>Takeoff clearance—copy, confirm, comply</li><li>Takeoffs—normal, crosswind, short, soft</li><li>Pattern departure</li></ul>		Traffic pattern  ✓ Landing  Landing clearance—copy, confirm, comply  Flaps—all settings  Slips to landing  Stabilized approach

Hours	

### STAGE ONE—Lesson 14 <u>Dual Aircraft</u> CROSS-COUNTRY STAGE CHECK

LANDING (	(continued)					FLIGH	IT PLAN ROL	JTE:			
		<b>✓</b> Go	around								
		Landings-	–normal, cros	swind, short,	soft						
			—height, cros								
		Touchdow	n—full stall, d	Irift, centerlin	e						
		Taxi cleara	ance—copy, c	confirm, comp	oly						
		<b>✓</b> Tax	ĸi								
		Taxi—wind	d, speed, brak	king, hazards	i						
		<b>✓</b> Sh	utdown								
POSTFLIGH	<u>1T</u>										
		Postflight i	inspection of a	aircraft							
		Close fligh	ıt plan								
		Debrief									
		Update sy	llabus and log	jbook							
COMPLETIO	ON STAND	ARDS									
This lesson	will be com	plete when t	he student ca	n perform all	maneuvers	to Private P	ilot ACS and	achieve a gr	ade of 2 or be	etter on all t	asks.
Instructor			Student	t			Date	A	cft Type	N #	
						<del></del>		<del></del> -			<del></del>
						<del></del>					<del> </del>
	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/AATD
Previous											
Fievious											
This											
Lesson											
Total											
				(5min)			(5min)	(45)	(±50)		(±24)
	Dual Day	+ Dual Nigh	t + Dual AAT	D = 31							
	Solo Day	+ Solo Nigh	t + Solo/PIC	X-C = 50							
	Dual Inst + Dual AATD = Total Inst/AATD										

Hours					

### STAGE ONE—Lesson 14 CROSS-COUNTRY STAGE CHECK CRITIQUE

Comments:			
Recommendation	ons:		
1	This Stage Check performance indicates that add	itional review is necessary.	
	Do review lessons on all items marked "1" until y	our instructor indicates a satisfactory "2".	
	Insert the review lesson sheets following this page.		
	Return to a check instructor for recheck.		
	Check Instructor	<u>Student</u>	<u>Date</u>
2	This Stage Check was performed in a satisfactory	manner. Move on to the next stage.	
	Check Instructor	Student	<u>Date</u>

## COMMERCIAL PILOT CERTIFICATION

### Training Course Outline

STAGE TWO

**Complex Flight Training** 

Lessons 15—18

11.0 hours (approx) of Dual complex flight training

which includes:

1.0 hours (approximately) of Instrument Training

Stage Two Objectives

The stage two objective is to teach the student how to operate complex airplanes. The student will be trained to a proficiency level which will allow them to obtain a complex and/or high-performance sign-off as appropriate.

### Stage Two Completion Standards

This stage will be complete when the student meets all lesson standards and satisfactorily performs the Stage Two

Check, and receives complex and/or high-performance endorsement as appropriate.

Pilot Requirements for flying a Complex and/or High-Performance Airplane

See 14 CFR Part 61.31 (e)(f)

### Requirements for PIC in a Complex and High-Performance Airplane

To fly solo in complex and/or high-performance airplanes owned by the University of Dubuque, you must meet the requirements of 14 CFR Part 61.31 (e)(f). You must have:

- 1. 10 hours of training in a complex and/or high-performance airplane
- 2. Complex and/or high-performance endorsement as appropriate, and
- 3. A flight check by an instructor employed by the University of Dubuque.

### STAGE TWO—Lesson 15 <u>Briefing</u> COMPLEX AIRCRAFT OPERATIONS

**OBJECTIVE:** Review of the complex, high-performance aircraft Pilot's Operating handbook.

**TIME**: As required.

SECTION 1—GEN	<u>IERAL</u>	SECTION 4—NORM	MAL PROCEDURES	SECTION 7—SYSTI	<u>EMS</u>
	Elec/Mech Flap Ops		Airspeeds		Airframe
	Constant Speed Props Ops		Constant Speed Props		Flight Controls
	Retractable Gear Ops		Ops		Instrument Panel
	High Performance Engine Ops	Checklists Procedur	<u>res</u>		Ground Control
	High Altitude Operations		Preflight		Wing Flap System
	Oxygen Requirements		Before Start		Landing Gear System
Aircraft Specific	,		Starting Engine		Baggage Compartment
	Three View		Before Takeoff		
	Engine				Seats
	Propeller		Takeoff		Doors & Windows
	Fuel		Enroute climb		Control Locks
	Oil		Cruise		Engine
	Weights		Descent		Propeller
	Loadings		Before Landing		Fuel System
	Abbreviations		_		Brake System
	Terminology		Landing		Electrical System
SECTION 2—LIMI	TATIONS		After Landing		Lighting System
	Airspeed Limits, Markings		Cold Weather Ops		Cabin Heating
	Powerplant Limits, Markings		Hot Weather Ops		Pitot-Static System
	Weight Limits		Noise Abatement		Vacuum System
	CG Limits	SECTION 5—PERF	ORMANCE		Stall Warning System
	Manuver Limits				Audio Control Panel
	Load Factor Limits	<del></del>	Use of Charts		Microphone / Headset
	Kinds of Operations Limits		Airspeed Calibrations		·
	Fuel Limitations		Temperature Conversion		Static Discharges
	Placards		Stall Speeds	SECTION 8—SERV	<u>CE</u>
SECTION 3—EME	RGENCY PROCEDURES		Rate of Climb		ID Plate
	Airspeeds		Time, Fuel, Distance		Owner Follow up
	Engine Failures				Airplane File
	Forced Landings	<del></del>	Cruise Performance		Airplane Inspections
	Fires		Range Profile		Pilot Maintenance
	lcing		Endurance Profile		Alterations / Repairs
	Landing with a Flat Tire		Landing Distance		Ground Handling
	Electrical	SECTION 6— WEIG	SHT AND BALANCE		Servicing
	Landing without elevator control				Cleaning and Care
	Emergency ops in clouds		Aircraft Weighing		
	Spins		Weight and Balance	SECTION 9—SUPP	<u>LEMENTS</u>
	Rough engine, Loss of Power		Equipment List		Supplemental Equipment

Hours	STAGE TWO—Lesson 15 Briefing
	COMPLEX AIRCRAFT OPERATIONS

COMPI	ETION	CTAND	VDDG

COM LETION CTANDANDO					
	information promptly in the POH and urposes. The student will achieve a gr			d performance ch	arts
Instructor	Student	Date	Acft Type	N #	
	<del> </del>		<del></del>	<del></del>	
<u></u>					

### STAGE TWO—Lesson 16 Dual

### **COMPLEX AIRCRAFT OPERATIONS**

**OBJECTIVE:** Practice of piloting skills required for complex aircraft.

**TIME**: 9.0 hours approximately

PREFLIGHT BRIEF	FLING	BASIC MANEUVERS					
	_ Discussion of the lesson		Climb				
	Review of POH emergency procedures		Climbs with turns-Cs (Vx, Vy, cruise), IR				
	Aeronautical Decision Making (ADM)		Traffic pattern departure				
	Land and Hold Short Lines (LAHSO)		Level-off from climb- IR				
	Controlled Flight Into Terrain (CFIT)		<b>✓</b> Cruise				
	RUNWAY INCURSION avoidance		Straight & level– IR				
	_		Level turns– shallow , medium, steep— IR				
	Wake turbulence/ wind shear		Engine checks, traffic checks				
	_ Positive transfer of controls	<b>EMERGENCY OPERAT</b>	TIONS				
	_ Collision avoidance		Emergency approach and landing				
	_ Stall / spin Awareness		Emergency descent				
PREFLIGHT		SYSTEMS AND EQUIP	MENT MALFUNCTIONS				
			Partial or complete power loss				
	_ ✓ Cockpit		Engine roughness or overheat				
	Certificates & Documents—ARROW		Carburetor or induction icing				
			Loss of oil pressure				
	_ Preflight inspection		Fuel starvation				
	Airplane servicing		Electrical malfunction				
STARTUP			Vacuum/pressure, & associated flight instrument malfunction				
	Engine start		Pitot/static				
			Landing gear or flap malfunction				
	Comm radio setup-freq, vol, xmitter		Inoperative or runaway trim				
	_ Nav radio setup– freq, ID, set course		Inadvertent door or window opening				
TAXI			Structural icing				
			Smoke/fire/engine compartment fire				
	_ <b>V</b> Taxi		Any other emergency appropriate to the airplane				
	_ Taxi clearance– copy, confirm, comply		Emergency equipment and survival gear				
	Taxiing- wind, speed, tracking, hazards	ADVANCED MANUEVE	RS				
	_ Traffic watch / Call HOLD SHORT lines		Emerg field, PMC, collision avoidance				
	_		Slow flight				
			Spin awareness				
TAKEOFF			Power-off stalls				
			Power-on stalls				
	_ <b>V</b> Takeoff		Accelerated stalls				
	Takeoff clearance-copy, confirm, comply	BASIC MANUEVERS					
	Takeoff-normal, crosswind, short, soft		✓ Descents				
	Gear retraction		Descents with turns– Cs, IR				
	_ Power reduction– throttle, propeller		Level-off from descent– IR				

Hours	STAGE TWO—Lesson 16 <u>Dual</u>
	COMPLEX AIRCRAFT OPERATIONS

LANDING											
		Approach	– location, co	mmunicatio	on						
		Pattern entry / traffic pattern									
		<b>✓</b> La	ınding								
		Landing o	clearance—co	py, confirm	, comply						
			d approach								
		Flaps- al									
			– normal, cros	sswind							
		Roundou	t– crosswind	cx, height							
		Touchdo	wn drift, cen	terline, full s	stall						
		<b>✓</b> Go	o around								
		Taxi clea	rance-copy, c	onfirm, com	ıply						
		<b>✓</b> Ta	axi– wind, spe	ed, braking	, hazards						
		<b>✓</b> Sh	nutdown								
POSTFLIGHT											
		Posflight	inspection of	aircraft							
			Update syllab		ook						
COMPLETION S	TANDA	RDS									
The Student will	perform	all maneuve	ers to Private	Pilot ACS a	and achieve	a grade of 2	or better on e	each task.			
Instructor			Student				Date	A	cft Type	N #	
			_								
			_								
		<del></del>		<del></del>		<del></del>					<del></del>
											<del></del>
	ual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/AATD
Previous											
This Lesson											
Total											
						Stage 3 only	Lesson 9 only				

### STAGE TWO—Lesson 17 Dual Aircraft or AATD

### **COMPLEX AIRCRAFT OPERATIONS**

**OBJECTIVE:** Review instrument flight operations in the complex aircraft.

TIME: 1.0 hours approximately. Instrument

PREFLIGHT BREIFING		TAXI	
	Discussion of this lesson		<b>✓</b> Taxi
	Review POH normal procedures		Taxi clearance- copy, confirm, comply
	ADM and risk management		Begin taxi- brake check, steering check
	RUNWAY INCURSION avoidance	<del></del>	Taxiing
	Checklist usage	TAKEOFF	
	Positive transition of controls		<b>✓</b> Takeoff
	Collision avoidance/Visual scanning		Takeoff clearance—copy, confirm, comply
	Stall / spin awareness		Takeoff—normal, crosswind
PREFLIGHT			Takeoff—short, soft
THE LIGHT			Gear retraction
	✓ Cockpit		Power reduction—throttle, propeller
	Certificates & Documents- ARROW	BASIC MANUEUVER	
	✔ Preflight inspection		
	▼ Fremgnt inspection		Climbs
	Airplane servicing		Climbs with turns (Vx, Vy, Cruise) IR
STARTUP			Traffic pattern departure
<u> </u>			Level off from climb—IR
	✓ Engine start		<b>✓</b> Cruise
	Comm radio setup– freq, vol, xmitter		Straight and level—IR
	Nav radio setup– freq, ID, Set Course		Level turns- shallow, medium, IR
	, , , , , , , , , , , , , , , , , , , ,		Engine checks, traffic checks
		INSTRUMENT PRAC	TICE
			Intercepting and tracking VOR radial
			VOR approach
			RNAV/GPS approach
			RNAV/GPS hold
			ILS approach
			Partial panel approach

Hours	

### STAGE TWO—Lesson 17 <u>Dual</u> COMPLEX AIRCRAFT OPERATIONS

LANDING											
		Approach-lo	ocation, comm	unication							
		Pattern enti	ry / traffic patte	rn							
		<b>✓</b> Land	ding								
		Landing cle	arance- copy,	, confirm, c	omply						
		Stabilized a	pproach								
		Landings-	normal, crossw	vind							
		Landings—	accuracy								
			crosswind cx,	-							
		Touchdown	– drift, centerli	ine, full sta	II						
		<b>✓</b> Go a	around								
		Taxi clearar	nce- copy, cor	nfirm, comp	oly						
		<b>✓</b> Taxi	– wind, speed,	, braking, h	azards						
		<b>✓</b> Shut	tdown								
POSTFLIGHT											
		Postflight in	spection of air	craft							
			odate syllabus		ok						
COMPLETION  The student will Instructor			ers to Private F Student	Pilot ACS a	ınd achieve ε		or better on e Date		Acft Type	N #	
mon doto.							Dato		1011 1770	• • • •	
						·					
						·					
	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/ AATD
Previous											
This Lesson											
Total					1	+					

Stage 3 only

Lesson 9 only



### STAGE TWO—Lesson 18

### **COMPLEX AIRCRAFT CHECK**

**OBJECTIVE:** The student will demonstrate proficiency in the maneuvers listed below.

**TIME**: 1.0 hours approximately.

PREFLIGHT BRIEFING		TAKEOFF	
	Discussion of this lesson		
	AIC systems and endorsement		<b>✓</b> Takeoff
	Review of POH emergency procedures		Takeoff clearance-copy, confirm, comply
	ADM and risk management		Takeoff– normal, crosswind, short, soft
	CFIT/Wire strike avoidance		Gear retraction
	RUNWAY INCURSION avoidance		Power reduction– throttle, propeller
	Wake turbulence / wind shear		Power reduction— tillottie, propeller
	Checklist usage	BASIC MANEUEVERS	
	Positive transfer of controls		M. Oliveb
	TFRs and SUA		Climb
	Collision avoidance		Climbs with turns- Cs (vx, Vy, cruise), VR-IR
	Aviation security		Traffic pattern departure
	Stall / spin awareness		Level-off from climb- VR-IR
	SRM		
✓ EMERGENCY PI	ROCEDURES (ORAL REVIEW)		Cruise
	Electrical fire, engine fire-on ground, inflight		Straight & level-Vr-IR
	Emergency descent		Level turns-shallow, medium, steep, VR-IR
	Alternator failure, Flap failure, gear failure		Engine checks, traffic checks
	lcing		•
	Ditching	✓ <u>EMERGENCY P</u>	ROCEDURES (PRACTICAL REVIEW)
PREFLIGHT			Engine failure– takeoff run, after takeoff, inflight
	✓ Cockpit		Forced landings- power, no power
	Certificates & Documents- ARROW		Landing gear failure
	✔ Preflight inspection		Emergency descent
	Airplane servicing	ADVANCED MANEUVE	:DS
STARTUP		ADVANCED MANEOVE	<del></del>
<u> </u>			Emerg Field, PMC, collision avoidance
	✓ Engine start		Slow flight
	Comm radio setup-freq, vol, xmitter		Power-off stalls
	Nav radio setup, freq, vol, xmitter		Power-on stalls
TAXI			Accelerated stalls
	<b>✓</b> Taxi		Spin awareness
	Taxi clearance– copy, confirm, comply	BASIC MANEUEVERS	
	Begin taxi– brake check, steering check	PHOTO INFINITURE ALICO	
	Taxiing- wind, speed, braking, hazards		✓ Descents
	Traffic watch / Call HOLD SHORT lines		Descents with turns-Cs, VR-IR
	<b>✓</b> Runup		Level-off from descent– VR-IR

Hours	STAGE TWO—Lesson 18
	COMPLEX AIRCRAFT CHECK

LANDING											
		Approach-	location, com	nmunication	ı						
		Pattern enti	ry / traffic pat	tern							
		<b>✓</b> Land	ding								
		Landing cle	arance- cop	y, confirm, c	comply						
		Stabilized a	•	•							
		Flaps- all s									
	<u> </u>		normal, cross	wind							
	<u> </u>	Landings—									
		Landings—									
			crosswind cx	, height							
			-drift, centerl		I						
		<b>✓</b> Go a	around								
		Taxi cleara	nce- copy, co	onfirm, com	ply						
		<b>✓</b> Taxi	– wind, spee	d, braking, l	nazards						
		<b>✓</b> Shu	tdown								
POSTFLIGH	- —— Т										
	<del>_</del>	Postflight in	spection of a	ircraft							
		-	odate syllabu		n k						
The student vition, with a gi	will demons rade of 2 o	etrate proficie r better, the p	ncy in the op- rimary instruc Student	ctor will issu	complex airduse the approp	riate endors	form all mane ements. Date		vate Pilot ACS	S. On succe	ssful comple-
						· · · · ·					
	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/ AATD
Previous											
This Lesson											
Total											
						Stage 3 only	Lesson 9 only		(±50)		(±25)
	Dual Day +	Dual Night	+ Dual AATE	) = ±42							
	Dual Inst +	Dual AATD	= Total Inst/	AATD							

### COMMERCIAL PILOT LESSON 18—Stage Check

Comments:			
Recommendati	ons:		
1	This Stage Check performance indicates that add	itional review is necessary.	
	Do review lessons on all items marked "1" until y	our instructor indicates a satisfactory "2".	
	Insert the review lesson sheets following this page.	ge.	
	• Then return to a check instructor.		
	Check Instructor	Student	<u>Date</u>
2	This Stage Check was newformed in a seti-factory	manner. Move on to the post stage	
	This Stage Check was performed in a satisfactory		
	Check Instructor	Student	<u>Date</u>

## COMMERCIAL PILOT CERTIFICATION

## Training Course Outline

#### STAGE THREE

#### COMMERCIAL MANEUVERS FLIGHT TRAINING

#### Lessons 19-25

13.0 hours (approx) of Dual Flight Training which includes3 hours of training in preparation for the practical test within 60 days preceding the date of the test.

### 15.0 hours (approx.) of SOLO\* commercial maneuvers flight training

which includes:

5.0 hours complex aircraft min.

### Stage Three Objectives

Students will be instructed in flying the maneuvers required of commercial pilot applicants. Students will receive instruction until they meet the requirements of the Commercial Pilot ACS.

### Stage Three Completion Standards

This stage will be complete when the student has completed all Stage Three Lessons, and when they have satisfactorily completed the Commercial Pilot Certification Training Course Outline.

Note: The required flight time in this stage can be accomplished in either a non-complex or a complex aircraft



### STAGE THREE—Lesson 19 <u>Solo</u> COMPLEX AIRCRAFT TRAINING

**OBJECTIVE:** Practice of piloting skills required for complex aircraft.

**TIME**: 5.0 hours minimum.

PREFLIGHT BRI	EFING (student briefs instructor)	TAKEOFF
	Discussion of this lesson	<b>✓</b> Takeoff
	Review of POH emergency procedures	
	ADM and risk management	Takeoff clearance-copy, confirm, comply
	TFRs and SUA	Takeoffs– normal, crosswind, short, soft
	Land and Hold Short Operations (LAHSO)	Gear retraction
	CFIT/Wire strike avoidance	Power reduction– throttle, propeller
	Checklist usage	BASIC MANEUVERS
	RUNWAY INCURSION Avoidance	
	Aviation security	
	Wake turbulence / wind shear avoidance	Climbs w/ turns– Cs (vx, Vy, cruise), VR-IR
	SRM	Traffic pattern departure
	Collision avoidance	Level-off from climb– VR-IR
	Stall / spin awareness	Cruise
VERIFY COMPL	EX / HP ENDORSEMENT	ADVANCED MANEUVERS
	✓ Cockpit	Emerg ldg field, PMC, collision avoidance
	Certificates & Documents– ARROW	Slow flight
	Columbates a Bestimonte 7 in New	Power– off stalls
	Preflight inspection	Power– on stalls
	Airplane servicing	Accelerated stalls
STARTUP		Spin awareness
	✓ Engine start	BASIC MANEUVERS
	Comm radio setup-freq, vol, xmitter	
	Nav radio setup– freq, ID, set course	Descents
TAVI		Descents w/ turns– Cs, VR-IR
TAXI		Level-off from descent– VR-IR
	✓ Taxi	
	Taxi clearance– copy, confirm, comply	
	Begin taxi– hazards, brake& steering check	
	Taxi– wind, speed, braking, hazards	
	Traffic watch / Call HOLD SHORT lines	
	<b>✓</b> Runup	

Hours	STAGE THREE—Lesson 19 Solo
	COMPLEX AIRCRAFT TRAINING

LANDING											
		Approach-l	ocation, com	munication							
		Pattern ent	ry / Traffic Pa	attern							
		<b>✓</b> Lan	ding								
		Landing cle	earance-copy	, confirm, c	omply						
		Stabilized A	Approach								
		Flaps- all s	settings								
		Landings—	-normal, cros	swind							
		Landings—	-short, soft								
		Roundout-	crosswind cx	k, height							
		Touchdowr	n– drift, cente	rline, full sta	all						
		<b>✓</b> Go	Around								
		Taxi cleara	nce- copy, co	onfirm, com	ıply						
		<b>✓</b> Tax	i– wind, spee	d, braking,	hazards						
		<b>✓</b> Shu	tdown								
POSFLIGHT											
		Doetflight in	nspection of a	piroraft							
		_									
			efing with inst								
			abus and log	DOOK							
COMPLETION	N STANDA	ARDS									
This lesson wi	ill be comp	olete when th	e student has	s performed	l a satisfacto	ry briefing, v	vith a grade o	of 2 or bette	r , and has flo	wn the req	uired hours a
Instructor	a a tao	•	Student				Date		Acft Type	N	#
						<del></del> -					
						<del></del>		<del></del>	<del></del>		
	Dual	Dual	Dual	Dual	AATD	Solo	Solo	Solo X-	Total	Total	Total
	Day	Night	X-Ctry	Inst		Day	Night	Ctry	Solo/PIC	Acft	Inst/ AATD
Previous											
This Lesson											
Total											



### STAGE THREE—Lesson 20 <u>Briefing</u> COMMERCIAL PILOT MANEUVERS

**OBJECTIVE:** The instructor will review, with the student, the required commercial maneuvers.

**TIME**: As required.

STEEP TURNS	
The student will be able to explain the maneuver in accordance with the Airplane Flying Handbook and the Commercial ACS while using a model airplane as a teaching aid.	l
CHANDELLES	
The student will be able to explain the maneuver in accordance with the Airplane Flying Handbook and the Commercial ACS while using a model airplane as a teaching aid.	I
LAZY EIGHTS	
The student will be able to explain the maneuver in accordance with the Airplane Flying Handbook and the Commercial ACS while using a model airplane as a teaching aid.	l
STEEP SPIRALS	
The student will be able to explain the maneuver in accordance with the Airplane Flying Handbook and the Commercial ACS while using a model airplane as a teaching aid.	l
EIGHTS- ON PYLONS	
The student will be able to explain the maneuver in accordance with the Airplane Flying Handbook and the Commercial ACS while using a model airplane as a teaching aid.	I
COMPLETION STANDARDS	
This lesson will be complete when the student can explain each maneuver completely thereby achieving a grade of 2 on each task.	
Instructor Student Date	
	_
	_

### STAGE THREE—Lesson 21

### **DUAL AIRCRAFT**

**OBJECTIVE:** The student will be instructed in performing the required commercial maneuvers.

**TIME**: 4.0 hours approximately.

PREFLIGHT BRIEFIN	IG	TAKEOFF	
	Discussion of this lesson		
	ADM and risk management		<b>✓</b> Takeoff
	LAHSO		Takeoff clearance-copy, confirm, comply
	Runway incursion avoidance (Call HOLD SHORT lines)		Takeoff– normal, crosswind, short, soft
	Stall & spin awareness		Pattern departure
	Checklist usage		r attern departure
	Wake turb / wind Shear / collision avoidance	BASIC MANEUEVERS	
	TFRs and SUA		Climb
	Positive transfer of controls		Climbs w/ turns- Cs (vx, Vy, cruise), VR-IR
	CFIT/Wire strike avoidance		Traffic pattern departure
	Aviation security		
	Land and Hold Short Lines (LAHSO)		Level-off from climb– VR-IR
	SRM		✓ Cruise Flight
<b>✓</b> <u>EMERGENCY</u>	PROCEDURES (ORAL REVIEW)		
	Fire- Startup, engine or electrical inflight, cabin,	COMMERCIAL MANEU	IVERS
	wing		Emerg field, PMC, collision avoidance
	Icing-Structural inflight, static port blockage, carb ice		Slow flight- P-factor, torque, heading, altitude
	Flap Failure / landing- with a flat tire		Spin awareness
	Electrical malfunctions		Stalls- power-off
	Emergency descent		Stalls- power-on
PREFLIGHT			Accelerated stalls
	Cockpit		Steep turns
	Certificates & Documents- ARROW		
	✓ Preflight inspection		Lazy eights
	Airplane servicing		Chandelles
	All plane servicing		Steep spirals
STARTUP			Eights on pylons
	✓ Engine start	BASIC MANEUVERS	
	Comm radio setup-freq, vol, xmitter		
	VOR setup- freq, ID, set course		✓ Descents
	RNAV / GPS setup		Descents w/ turns- Cs (Vx, Vy, cruise), VR-IR
TAXI		LANDING	
	M. Tari	LANDING	
	✓ Taxi		Approach – location, communication
	Taxi clearance– copy, confirm, comply		Pattern entry
	Begin taxi– brake check, steering check		Landing
	Taxiing– wind, speed, braking, hazards		Landing
	Call HOLD SHORT lines		Traffic pattern– downwind, base, final
	<b>✓</b> Runup		Landing clearance-copy, confirm, comply

Hours	STAGE THREE—Lesson 21
	DUAL AIRCRAFT
LANDING (continued)	
	Stabilized approach
	Flaps– all settings
	Forward slips to landing
	Landings-normal, xwind, short, soft, accuracy
	Roundout– height, crosswind cx
	Touchdown– full stall, drift, centerline
	✓ Go around
	Taxi clearance– copy, confirm, comply
	✓ Taxi– wind, speed, braking, hazards
	✓ Shutdown
POSTFLIGHT	
	Postflight inspection of aircraft
	Debrief / Update syllabus and logbook

This lesson will be complete when the student can perform the commercial maneuvers to the following standards: Headings  $\pm 15\,$  degrees, Altitude  $\pm 150'$ , Airspeed  $\pm 10\,$  kts, while maintaining coordinated flight.

Instructor	Student	Date	Acft Type	N #

	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	AATD	Solo Day	Solo Night	Solo/PIC X-Ctry	Total Solo/PIC	Total Acft	Total Inst/ AATD
Previous											
This Lesson											
Total											
						Stage 3 only	Lesson 9 only				

#### STAGE THREE—Lesson 22

### **SOLO AIRCRAFT**

**OBJECTIVE:** The student will practice the required commercial maneuvers.

**TIME**: 5.0 hours approximately.

PREFLIGHT BRIEFING	1	TAKEOFF	
	Discussion of this lesson		<b>✓</b> Takeoff
	Weather planning		Takeoff clearance-copy, confirm, comply
	ADM and risk management		Takeoff– normal, crosswind, short, soft
	Runway incursion avoidance (Call HOLD SHORT lines)		Pattern departure
	Checklist usage		
	Stall & spin awareness	BASIC MANEUEVERS	!
	Aviation security		<b>✓</b> Climb
	Wake turb / Wind shear / Collision avoidance		Climbs w/ turns- Cs (vx, Vy, cruise), VR-IR
	CFIT/Wire strike avoidance		Traffic pattern departure
	SRM		Level-off from climb- VR-IR
	Land an Hold Short Lines (LAHSO)		✓ Cruise flight
<b>✓</b> <u>EMERGENCY P</u>	ROCEDURES (ORAL REVIEW)	COMMERCIAL MANE	UVERS
	Review all procedures		Emerg field, PMC, collision avoidance
PREFLIGHT			Slow flight– P-factor, torque, heading, altitude
			Spin awareness
	✓ Cockpit		Stalls- power-off
	Certificates & Documents- ARROW		Stalls- power-on
	✓ Preflight inspection		Accelerated stalls
	Airplane servicing		Steep turns
	, , , , , , ,		Lazy eights
STARTUP			Chandelles
	✓ Engine start		Steep spirals
	Comm radio setup-freq, vol, xmitter		Eights on pylons
	VOR setup- freq, ID, set course	BASIC MANEUVERS	
	RNAV / GPS setup		<b>M</b> 5
TAXI			Descents
<del></del>			Descents w/ turns- Cs (Vx, Vy, cruise), VR-IR
	<b>✓</b> Taxi	LANDING	
	Taxi clearance– copy, confirm, comply		Approach– location, communication
	Begin taxi- hazards, brake& steering check		Pattern entry
	Taxi– wind, speed, braking, hazards		<b>✓</b> Landing
	Call HOLD SHORT lines		Traffic pattern– downwind, base, final
	<b>✓</b> Runup		Landing clearance-copy, confirm, comply

Hours	

### STAGE THREE—Lesson 22 SOLO AIRCRAFT

LANDING (	continued)										
		Stabilized a	approach								
		Flaps- all s	settings								
		Forward sli	ips to landing								
		Landings-n	ormal, xwind,	, short, soft,	, accuracy						
			height, crossw								
		Touchdowr	n– full stall, dr	ift, centerlin	ne						
		<b>✓</b> Go a	around								
		Taxi cleara	nce- copy, co	onfirm, com	ıply						
		<b>✓</b> Taxi	i– wind, spee	d, braking,	hazards						
		<b>✓</b> Shu	ıtdown								
POSTFLIGH	 IT										
<u>· ·                                 </u>	<u></u>	Postflight in	nspection of a	aircraft							
			pdate syllabu		ook						
			-	-							
2014DI ETI	··· CTANDA										
COMPLETIC				_							
This lesson what complete	will be comp ed all tasks.	lete when th	e student has	s performed	l a satisfactor	y briefing, wi	ith a grade o	f 2 or better,	, and has flow	n the require	ed hours and
Instructor			Student			ļ	Date	A	cft Type	N #	
			-								
					<del> </del>	<del></del> -	<del></del>		<del> </del>		<del></del>
	Dual	Dual	Dual	Dual	AATD	Solo	Solo	Solo/PIC	Total	Total	Total
	Day	Night	X-Ctry	Inst		Day	Night	X-Ctry	Solo/PIC	Acft	Inst/ AATD
Previous											AAID
Fievious											
This					+		<u> </u>		+		
Lesson											
Total				_	T			Τ		<del></del>	
					I .	1	1	I			
							Lesson 9				

only

only

### STAGE THREE—Lesson 23

### **DUAL AIRCRAFT**

 $\textbf{OBJECTIVE:} \ The \ student \ will \ be \ instructed \ in \ performing \ the \ required \ commercial \ maneuvers.$ 

**TIME**: 5.0 hours approximately.

PREFLIGHT BRIEFING		TAKEOFF	
	Discussion of this lesson		
	Weather planning		<b>✓</b> Takeoff
	ADM and risk management		Takeoff clearance-copy, confirm, comply
	TFRs and SUA		Takeoff– normal, crosswind, short, soft
	Runway incursion avoidance (Call HOLD SHORT lines)		Pattern departure
	Stall & spin awareness		
	Wake turb / wind shear / collision avoidance	BASIC MANEUEVERS	
	Checklist usage		<b>✓</b> Climb
	Positive transfer of controls		Climba w/ turna Ca (w. V., arvisa) VD ID
	CFIT/Wire strike avoidance		Climbs w/ turns- Cs (vx, Vy, cruise), VR-IR
	Aviation security		Traffic pattern departure
	Land an Hold Short Lines (LAHSO)		Level-off from climb- VR-IR
	SRM		✓ Cruise flight
✓ <u>EMERGENCY P</u>	ROCEDURES (ORAL REVIEW)		ordiso ingrit
	Fire-startup, engine or electrical inflight, cabin,	COMMERCIAL MANEU	VERS
	wing		Emerg field, PMC, collision avoidance
	Icing-Structural inflight, static port blockage, carb ice		Slow flight– P-factor, torque, heading, altitude
	Flap Failure/ landing- with a flat tire		Spin awareness
	Electrical malfunctions		Stalls- power-off
	Emergency descent		
PREFLIGHT			Stalls– power-on
	.4		Accelerated stalls
	Cockpit		Steep turns
	Certificates & Documents– ARROW		Lazy eights
	✔ Preflight inspection		Chandelles
	Airplane servicing		Steep spirals
STARTUP			Eights on pylons
	✓ Engine start	DAGIO MANIELIVEDO	
	2 Engine start	BASIC MANEUVERS	
	Comm radio setup-freq, vol, xmitter		✓ Descents
	VOR setup– freq, ID, set course		December will turne. Co (Alv. My. oruine) MR IR
	RNAV / GPS setup		Descents w/ turns- Cs (Vx, Vy, cruise), VR-IR
TAXI		LANDING	
	<b>✓</b> Taxi		Approach- location, communication
	Taxi clearance- copy, confirm, comply		Pattern entry
	Begin taxi– hazards, brake& steering check		
	Taxi– wind, speed, braking, hazards		Landing
	Call HOLD SHORT lines		Traffic pattern– downwind, base, final
	<b>✓</b> Runup		Landing clearance-copy, confirm, comply

Hours	STAGE TH
	DUAL AIRC

### STAGE THREE—Lesson 23 DUAL AIRCRAFT

LANDING (co.	ntinued)										
		Stabilized a	pproach								
		Flaps- all s	ettings								
		Forward sli	ps to landing								
		Landings-n	ormal, xwind,	short, soft,	accuracy						
		Roundout-	height, crossw	ind ex							
		Touchdowr	– full stall, dr	ift, centerlin	е						
		<b>✓</b> Go a	around								
		Taxi cleara	nce– copy, co	onfirm, com	ply						
		<b>✓</b> Taxi	– wind, spee	d, braking, l	nazards						
		<b>✓</b> Shu	tdown								
POSTFLIGHT											
		Postflight in	spection of a	ircraft							
		Debrief / U	odate syllabu	s and logbo	ok						
COMPLETION	STANDA	RDS									
This lesson wil ±150', Airspee	be comp	lete when th	e student car	perform th	e commercia	l maneuvers	to the follow	ving standard	ls: Headings	±15 degree	s, Altitude
Instructor	•		Student				Date	А	cft Type	N #	
		<del></del>				<del></del>		<del></del>		<del></del>	
	Dual	Dual	Dual	Dual	AATD	Solo	Solo	Solo/PIC	Total	Total	Total
	Day	Night	X-Ctry	Inst	AAID	Day	Night	X-Ctry	Solo/PIC	Acft	Inst/
Previous											AATD
Frevious											
This Lesson											
Total											
- Total											
						Stage 3	Lesson 9				

### STAGE THREE—Lesson 24

### **SOLO AIRCRAFT**

**OBJECTIVE:** The student will practice the required commercial maneuvers.

**TIME**: 5.0 hours approximately.

PREFLIGHT BRIEFING	TAKEOFF
Discussion of this lesson	<b>✓</b> Takeoff
Weather planning	
ADM and risk management	Takeoff clearance-copy, confirm, comply
TFRs and SUA	Takeoff– normal, crosswind, short, soft
Runway incursion avoidance (Call HOLD SHORT lines)	Pattern Departure
Stall & spin awareness	BASIC MANEUEVERS
Checklist usage	<b>✓</b> Climb
Wake turb / wind shear / collision avoidance	Climbs w/ turns– Cs (vx, Vy, cruise), VR-IR
CFIT/Wire strike avoidance	Traffic pattern departure
Aviation security	Level-off from climb– VR-IR
Land an Hold Short Lines (LAHSO)	<del></del>
SRM	Cruise flight
4	COMMERCIAL MANEUVERS
<b>✓</b> EMERGENCY PROCEDURES (ORAL REVIEW)	Emerg field, PMC, Collision Avoidance
Review all of procedures	Slow flight– P-factor, torque, heading, altitude
PREFLIGHT	Spin awareness
✓ Cockpit	Stalls- power-off
Certificates & Documents– ARROW	Stalls– power-on
Certificates & Documents- ARROW	Accelerated stalls
Preflight inspection	Steep turns
Airplane servicing	Lazy eights
STARTUP	Chandelles
	Steep spirals
Engine Start	Eights on pylons
Comm radio setup-freq, vol, xmitter	BASIC MANEUVERS
VOR setup– freq, ID, set course	DAGIO MANEOVERO
RNAV / GPS setup	
TAXI	Descents w/ turns- Cs (Vx, Vy, cruise), VR-IR
<b>_ _ V</b> Taxi	LANDING
Taxi clearance– copy, confirm, comply	Approach– location, communication
Begin taxi– hazards, brake& steering check	Pattern Entry
Taxi– wind, speed, braking, hazards	<b>✓</b> Landing
Call HOLD SHORT lines	<del></del>
M . D	Traffic pattern– downwind, base, final
	Landing clearance-copy, confirm, comply

Hours	STAGE T
	SOLO AIF

### STAGE THREE—Lesson 24 SOLO AIRCRAFT

		Stabilized a									
		Flaps- all s									
		Forward sli	ips to landing								
			ormal, xwind,		, accuracy						
			height, crossw								
		Touchdowr	n– full stall, dr	ift, centerlin	е						
		<b>✓</b> Go	around								
		Taxi cleara	nce- copy, co	onfirm, com	ply						
		<b>✓</b> Tax	i– wind, spee	d, braking,	hazards						
		<b>✓</b> Shu	ıtdown								
POSTFLIGH	т										
	<u>-</u>	Postflight ir	nspection of a	nircraft							
			pdate syllabu		ook						
		,	,								
This lesson v	vill be com	plete when th	ie student has	s performed	l a satisfactoı	ry briefing, w	ith a grade of	2 or better,	and has flow	n the requir	ed hours and
Instructor	ou un tuotto	•	Student				Date	A	cft Type	N #	
						<del></del> .		<del></del>			
					<del></del>	<del></del> .					
	Dual	Dual	Dual	Dual Inst	AATD	Solo	Solo	Solo/PIC	Total	Total	Total Inst/
	Day	Night	X-Ctry	IIIət		Day	Night	X-Ctry	Solo/PIC	Acft	
Provious	Day	Night	X-Ctry	IIISt		Day	Night	X-Ctry	Solo/PIC	Actt	AATD
Previous	Day	Night	X-Ctry	mst		Day	Night	X-Ctry	Solo/PIC	Actt	
	Бау	Night	X-Ctry	mst		Day	Night	X-Ctry	Solo/PIC	Actt	
Previous  This Lesson	Бау	Night	X-Ctry	mst		Day	Night	X-Ctry	Solo/PIC	Acit	
This Lesson	Бау	Night	X-Ctry	mst		Day	Night	X-Ctry	Solo/PIC	Actt	
This	Day	Night	X-Ctry	ilist		Day	Night	X-Ctry	Solo/PIC	ACIT	

#### STAGE THREE—Lesson 25

### **DUAL AIRCRAFT**

**OBJECTIVE:** The student will be checked in the performance of the required commercial maneuvers.

**TIME**: 4.0 hours approximately.

PREFLIGHT BRIEFING	STARTUP
Discussion of this lesson Weather planning/ Flight Planning/ Filing	Engine start
ADM and risk management	Comm radio setup-freq, vol, xmitter
TFRs and SUA	VOR setup– freq, ID, set course
Runway incursion avoidance (Call HOLD SHORT lines)	RNAV / GPS setup
Stall & spin awareness	TAXI
Checklist usage	<b>✓</b> Taxi
Wake turb / wind shear / collision avoidance	Taxi clearance– copy, confirm, comply
Positive transfer of controls	Begin taxi– hazards, brake& steering check
CFIT/Wire strike avoidance	Taxi– wind, speed, braking, hazards
Aviation security	Call HOLD SHORT lines
Land an Hold Short Lines (LAHSO)	M. Dunun
SRM	
<b>✓</b> EMERGENCY OPERATIONS (oral review)	TAKEOFF
Emergency approach and landing	
Emergency descent	Takeoff clearance-copy, confirm, comply
✓ SYSTEMS AND EQUIPMENT MALFUNCTIONS	Takeoffs– normal, crosswind, short, soft
Partial or complete power loss	Gear retraction
Engine roughness or overheat	Power reduction– throttle, propeller
Carburetor or induction icing	Pattern departure
Loss of oil pressure	BASIC MANEUEVERS
Fuel starvation	<b>✓</b> Climb
Electrical malfunction	<del></del>
Vacuum/pressure, & associated flight instrument malfunction	Climbs w/ turns– Cs (vx, Vy, cruise), VR-IR Traffic pattern departure
Pitot/static	Level-off from climb– VR-IR
Landing gear or flap malfunction	Cruise flight
Inoperative or runaway trim	COMMERCIAL MANEUVERS
Inadvertent door or window opening	<del></del>
Structural icing	Emerg field, PMC, collision avoidance  Slow flight– P-factor, torque, heading, altitude
Smoke/fire/engine compartment fire	
Any other emergency appropriate to the airplane	Spin awareness Stalls- power-off
Emergency equipment and survival gear	Stalls- power-on
PREFLIGHT	Stails power-on Accelerated stalls
	Steep turns
Cockpit	Lazy eights
Certificates & Documents– ARROW	Lazy eights Chandelles
✓ Preflight inspection	Steep spirals
Airplane servicing	Eights on pylons

	Hours	

### STAGE THREE—Lesson 25 DUAL AIRCRAFT

~	<u>EMERGEI</u>	NCY O	PERATIONS	<u> </u>			LANDING	(continued)	)			
		E	Emergency a	approach and	landing				Traffic	: Pattern– downv	vind, base, f	inal
		E	Emergency d	lescent				Landing clearance-copy, confirm, comply				
		8	Systems and	equipment n	nalfunctions							
		E	Emergency e	equipment an	d survival ge	ear		Stabilized Approach				
NAVIO	SATION									– all settings		
		F	Pilotage						Forwa	ard slips to landin	g	
			Dead reckoni	ina					Landi	ngs-normal, cros	swind, short	t, soft, accuracy
			Navigation S	•					Round	dout-height, cros	swind cx	
			ATC radar se	•					Touch	ndown- full stall,	drift, centerl	ine
			Diversion									
			_ost Procedu	ıres					<b>~</b>	Go Around		
BASI	C MANEUV								Taxi c	clearance- copy,	confirm, cor	mply
DAGI	CIVIAINEOV	LINO							<b>~</b>	Taxi		
			<b>✓</b> Desce	ents					Tovi	wind, speed, bra	kina hozor	do
	Descents w/ turns- Cs (Vx, Vy, cruise), VR-IR							ı axı–	wind, speed, bra	iking, nazan	us	
LAND	ING								<b>✓</b>	Shutdown		
		,	Approach-loc	cation, comm	unication		POSTFLI	СПТ				
			Pattern entry				FOSTILI	<u> </u>				
									Postflight inspection of aircraft			
			Landir	ng					Debrief / Update syllabus and logbook			ook
COMP	PLETION S	TANDA	ARDS									
				e student ha	s performed	a satisfacto	ry briefing, v	with a grade o	of 3 or be	etter , and has flo	wn the requ	ired hours and
has co	mpleted all	l tasks.										
Instru	ctor			Student	:			Date		Acft Type	N #	‡
							<del></del>				<del></del>	<del></del>
			Devel	Devel	Devel	AATD	0.1.	0.1.	0-1-	V T-1-1	Tatal	Total
		ual ay	Dual Night	Dual X-Ctry	Dual Inst	AATD	Solo Day	Solo Night	Solo : Ctry		Total Acft	Total Inst/
											1	AATD
Prev	ious											
	This											
Les	sson											
	Total .											
			(2 min)		(5 min)			(5 min)		(65 min)		
	Dual	day +		+ Dual AATI	D = 55 (min)							
				+ Solo/PIC >								
			o/PIC = 120 (									

Hours	STAGE THREE —LESSON 26—	•		
	<b>OBJECTIVE:</b> The student will der Pilot.	nonstrate the	knowledge	e necessary to act as Commercial
	TIME: As required.			
ERTIFICATES—STU	DENT			Convective Outlook
	Syllabus correct			Freezing Level/Icing Prob. & Sev.
	Verification of Pilot Certificate			General:
	Verification of Medical Certificate  Verification of Medical Certificate			En Route Weather/Wx Sources
	<del></del>			NOTAMs (D and FDC)
	Completing 8710 Form/ IACRA			_ Meteorology (i.e. Wx Theory)
	Endorsements			Risk Elements
ILOT QUALIFICATIO	<del></del>	CPOSS CO		EHT PLANNING
	Currency, Privileges, Limitations	<u>CRO33-CO</u>	ONIKI FLIC	
	Documents & ID Requirements			_ Route Planning & Checkpoints
	Logbook/Record Keeping			_ Applying UTC and Time Zones
	Compensation			_ Pilotage and Dead Reckoning
	Medical Certificates			_ Time, Speed, and Distance
	Risk Elements			_ True Airspeed & Density Altitude
IRWORTHINESS RE	QUIREMENTS			_ Planned vs. Actual Calculations
	Certificates			_ Magnetic Compass Errors
	Inspections			Power Setting Selection
	Preventative Maintenance			_ Terms: MC, TC, TH, MH, CH
	Required Equipment			_ Fuel Planning
	Inoperative Equipment (MEL, KOEL)			_ Altitudes and Obstacles
	Special Flight Permit			_ Sectional and Symbology
	ADs, SAIBs			_ Activating/Closing Flight Plans
	Risk Elements			Ground-based Navigation (orientation course determination, tests, and regutions)
/EATHER INFORMA	<u>FION</u>			GPS, RAIM, WAAS
	Adverse Conditions:			Radar Services/Assistance
	TFRs			Diversion and Lost Procedures
	Closed/Unsafe NOTAMs			Risk Elements
	WST/WS/WA/UUA/CWA	NATIONAL -		
	Current Weather:	INATIONAL /	AIRSPACE S	
	METARs/UAs			_ Types of Airspace and Classes
	Wx Depiction/Surf. Analysis Chart			_ Requirements and Restrictions
	Radar & Radar Summary Chart			_ SUA, SFRA, and Other Airspace
	Forecasts:			_ Airspeed Limitations
	FA/TAF/FD			_ Risk Elements

Surface/SIGWX Prog. Charts

# STAGE THREE —LESSON 26 (BRIEFING) PRE-EVALUATION ORAL (CONTINUED)

PERFORMANCE AND L	IMITATIONS		Alcohol, Drugs, OTC Meds
	. Charts, Tables, and Data		ADM & Hazardous Attitudes
	. Factors Affecting Performance		Collision Avoidance
	. Loading on Performance		Risk Elements
	. Weight and Balance	COMMUNICATIONS AND	LIGHT GUN SIGNALS
	. Aerodynamics		Obtaining Frequencies
	. Risk Elements		Communication Procedures and
OPERATION OF SYSTE	<u>MS</u>		Phraseology
	. Primary Flight Controls and Trim		ATC Light Signal Recognition
	. Secondary Flight Controls		Transponders  Radar Assistance
	. Powerplant and Propeller		Lost Communication Procedures
	. Landing Gear		
	Fuel, Oil, and Hydraulic		Automated WX and Airport Info
	Electrical		NTSB reporting  Risk Elements
	. Avionics	TRAFFIC PATTERNS	Nisk Liements
	Pitot-Static, Vacuum/Pressure & Associ-	HAITIOTATIERRO	Toward/Nan toward Operations
	ated Flight Instruments		Towered/Non-towered Operations
	. Environmental		Runway Selection
	Deicing and Anti-Icing		Right-of-Way Rules
	. Oxygen Systems		Wake Turbulence
	. Risk Elements		Runway Incursion Avoidance
HUMAN FACTORS			Parachuting Operations
	Hypovia		Different Types of Aircraft
	. Hypoxia		Airport markings/lighting
	. Hyperventilation		Risk Elements
	. Middle Ear and Sinus Problems	HIGH ALTITUDE OPERA	TIONS
	Spatial Disorientation		Supplemental Oxygen—Unpressurized and
	. Motion Sickness	<del></del>	pressurized
	. Carbon Monoxide Poisoning		Physiological factors
	. Stress and Fatigue		Continuous flow, demand, and pressure- demand oxygen systems
	. Dehydration and Nutrition		Types of oxygen
	. Hypothermia		Pressurization
	. Optical Illusions		Time of useful consciousness
	. Dissolved nitrogen		Risk Elements

# STAGE THREE —LESSON 26 (BRIEFING) PRE-EVALUATION ORAL (CONTINUED)

EMERGENCY OPERATION	DNS		
	Emergency Descent		System and Equipment Malfunction:
	Immediate action items		Partial or Complete Power Loss
	Glide Speed vs. Distance		Engine Roughness or Overheat
	Stabilized Approach		Carburetor or Induction Icing
	Energy Management		Loss of Oil Pressure
	Wind and Effects		Fuel Starvation
	Load Factors		Electrical Malfunction
	Communications		Vacuum/Pressure and Associated Flight Instruments Malfunction
<del></del>	ATC Deviations		Pitot/Static System Malfunction
	ELTs: Operation/Limitations/To	ests	Inoperative Trim
	Radar Assistance/Transponde	ers	Inadvertent Door or Window Opening
	Minimum Fuel		Structural Icing
	Emergency Equipment		
	Climate Extremes (Hot/Cold)		Smoke/Fire/Engine Compartment Fire
	Mountainous Terrain		Floring Floring Deals Display Malford for
	Overwater Operations		Electronic Flight Deck Display Malfunction
	Gear and Physical Needs		Landing Gear or Flap Malfunction
	Supplemental Oxygen		Any Other Emergency Appropriate to the Airplane
	Fire Extinguisher		Risk Elements for all Emergency
	High Drag Vs. Low Drag		Operations
COMPLETION STANDA	RDS_		
	strate sufficient knowledge in the	e lesson areas to rate at least a 3 on each	
<u>Instructor</u>		Student	<u>Date</u>
<del></del>			<del></del>

### UD COMMERCIAL PILOT END-OF-COURSE EVALUATION— PAGE 1

OBJECTIVE: The student will demonstrate the knowledge and skills necessary to become a Commercial Pilot. TIME: As required.

Student	Examiner	Date				
	ator must assess the applicant on all skill elements for	III. AIRPORT OPERATIONS				
	ator must also assess at least one knowledge element	Communications and ATC light signals				
	agement element in each task, focusing on any task	Communications and ATC light signals				
element(s) the ap	oplicant missed on the knowledge exam.	Traffic patterns				
EVALUATION PR	RELIMINARIES	IV. TAKEOFFS, LANDINGS, GO-AROUNDS				
	Driver license– current, picture ID	Normal takeoff and climb				
	Private certificate- current					
	Log Endorsements– correct	Normal approach and landing				
	Medical Certificate— current 3rd Class or higher	Soft field takeoff and climb				
	8710 Form– correct, dated, signed	Soft-field approach and landing				
	Knowledge test report– current, 70 or better, test deficiencies signed off by the instructor	Short-field takeoff and climb				
	Certificate of Enrollment– completed	Short-field approach and landing				
	Training Course Outline- completed, hours	Power-off 180° approach and landing				
	Ground School sign-off– verified	Go-around/rejected landing				
I. PREFLIGHT PE	REPARATION	V. PERFORMANCE & GROUND REFERENCE MANEUVERS				
	Certificates & Documents					
	Airworthiness requirements	Note: The examiner shall at least select either Task A or B, and either C or D.				
	Weather information	A. Steep Turns				
	Cross-Country flight planning	B. Steep spirals				
	National Airspace System	D. Goop opniale				
	Performance & Limitations	C. Chandelles				
	Systems operations	D. Lazy eights				
	Human factors	Eight on Pylons				
II. PREFLIGHT PI	ROCEDURES	VI. NAVIGATION				
	Preflight assessment	Pilotage/dead reckoning				
	Flight deck management					
	Engine starting	Navigation systems/ATC radar services				
	Taxiing	Diversion				
	Before takeoff check	Lost procedures				

### UD COMMERCIAL PILOT END-OF-COURSE EVALUATION— PAGE 2

### Stall Note: Acknowledges the cues and recover promptly at the first indication of an impending stall (e.g., aircraft buffet, stall horn, etc.) \_\_\_\_\_ Maneuvering during slow flight \_\_\_ Power– off stalls Power– on stalls \_\_\_\_ Accelerated stalls \_\_\_\_\_ Spin Awareness VIII. HIGH ALTITUDE OPERATIONS \_\_\_\_\_ Supplemental oxygen \_\_\_\_\_ Pressurization IX. EMERGENCY OPERATIONS \_\_\_\_\_ Emergency descent \_\_\_\_ Emergency equipment and survival gear \_ \_\_\_\_ Emergency approach and landing \_\_\_\_\_ Systems & equipment malfunctions X. POSTFLIGHT PROCEDURES \_\_\_\_\_ After landing—parking and securing

VII. SLOW FLIGHT AND STALLS

### UD COMMERCIAL PILOT END-OF-COURSE EVALUATION—PAGE 3 CRITIQUE

Attempt Flig	ght 1	COMPLETION STANDARDS  A student pilot must meet the FAA Commercial Pilot ACS on this evaluation		
Examiner		before being awarded a Commercial Pilot Certific		
		COMMENTS:		
Oral Time _				
Flight Time <sub>-</sub>				
Attempt Fli	ght 2			
Examiner			-	
Student				
Date				
Oral Time _				
Flight Time _				
Attempt Flig	ght 3		_	
Examiner				
Student				
Date				
Oral Time_				
Flight Time_				
TOTAL ORA	AL TEST TIME			
TOTAL FLIG	OHT TEST TIME			
AIRCRAFT I	N#			
Recommendation	is: The End-Of-Course Evaluation performance indica	ites the additional review is necessary.		
•	Do review lessons on all items marked "1" until yo	our instructor indicates a satisfactory "3".		
•	Insert the review lesson sheets following this pag	e.		
•	Then return to the Chief or Assistant Chief Instruc		D-4-	
C	Chief/ Assistant Chief Instructor	Student	Date	
2 T	his End-of-Course Evaluation was performed in a	a satisfactory manner.		
C	Chief/ Assistant Chief Instructor	Student	Date	
_				

### **MEMO**

ГО:	Chief Instructor, University of Dubuque Flight Center
FROM:	Chief Ground Instructor / Instructors
DATE:	
RE:	Commercial Pilot Ground School Graduation
The following	g student has successfully completed all the requirements for the Commercial Pilot ool Course:

#### Hours

Stage 1 – approximately15.0 ground training hours

Stage 2 – approximately 5.0 ground training hours

Stage 3 – approximately 15.0 ground training hours

Minimum of 35.0 ground training hours

#### Objective

The objective of the Commercial Ground School Training Course is to provide the commercial pilot student with the background and knowledge required of the professional commercial pilot operating in the modern National Airspace System and today's challenging aviation environment. At the end of this course, the student will have the knowledge to pass the FAA Commercial Pilot Airplane Knowledge test and to meet other UD Assessment criteria.

#### **Completion Standards**

Students will meet the ground school completion standards by demonstrating through written tests, oral tests, and school records that they meet the requirements specified in 14 CFR 61 and 141. A passing grade of 80% on all stage exams and a final exam will be required for completion.

STAGE 1

AIRPORTS, AIRSPACE AND FLIGHT INFORMATION

Lessons 1-6

15.0 hours (approx) of ground training

#### Stage 1 Objectives

In this stage the student will review information relating to airports, flight planning, navigation, and meteorology and aircraft performance. Aviation physiology, aeronautical decision making and the Code of Federal Regulations [CFRs] relating to commercial pilot operations will be discussed.

#### Stage 1 Completion Standards

To complete this stage the student must pass a stage exam with a minimum score of 80%. The instructor will review each incorrect response to ensure complete understanding before the student progresses to the next stage.

#### LESSON 1

#### AIRPORTS, AIRSPACE AND FLIGHT INFORMATION

#### **OBJECTIVES**

⇒ To review the airport environment, national airspace system, flight information sources, collision avoidance and runway incursion avoidance techniques.

#### CONTENT

- Runway and Taxiway Markings
- Runway Incursion Avoidance
- Land and Hold Short Operations
- Airport Lighting Systems
- National Airspace System
- Sources of Flight Information

#### LESSON COMPLETION STANDARDS

Demonstrate understanding of the airport environment, airspace and flight information by a written or oral quiz.

#### **ASSIGNED READING**

Read material on meteorology and weather information products in the appropriate texts.

## LESSON 2 WEATHER PATTERNS AND HAZARDS

#### **OBJECTIVES**

⇒ To review sources of weather information, weather patterns and hazards related to flight operations, weather reports, forecasts and other weather products.

#### **CONTENT**

- Weather Factors
- Weather Hazards
- Printed Reports and Forecasts
- Graphic Weather Products
- Sources of Weather Information

#### LESSON COMPLETION STANDARDS

Demonstrates adequate knowledge of the material by a written or oral quiz.

#### ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

## LESSON 3 PILOTAGE AND DEAD RECKONING

#### **OBJECTIVES**

- ⇒ To improve the student's knowledge of VFR flight planning procedures, route selection and lost procedures.
- ⇒ To review pilotage and dead reckoning navigation under VFR

#### **AERONAUTICAL CHARTS**

- Sectional charts
- VFR Terminal Area Charts
- World Aeronautical Charts
- Longitude and Latitude
- Airport Data
- Navigation aids
- Airspace
- Obstructions

#### PILOTAGE AND DEAD RECKONING

- Pilotage
- Selecting Checkpoints
- Following a Route
- Orientation
- Dead Reckoning
- Navigation Plotter
- Flight Planning
- Navigation Log
- Flight Plan
- Position Reports
- Flying Over Hazardous Terrain

#### **LESSON COMPLETION STANDARDS**

Demonstrate an understanding of VFR charts, pilotage, dead reckoning and cross-country planning by means of a written or oral quiz and completion of a sample flight log.

#### ASSIGNED READING

Read Human Factors Concepts in appropriate texts.

#### LESSON 4

## AVIATION PHYSIOLOGY AND AERONAUTICAL DECISION MAKING

#### **OBJECTIVES**

⇒ To become familiar with the physiological factors affecting day and night flight operations and the adverse effects of these factors. In addition, human factors concepts and the principles of crew resource management that affect aeronautical decision-making will be discussed.

#### **AVIATION PHYSIOLOGY**

- The Eye
- Night Vision
- Night Scanning
- Visual Illusions
- Autokinesis
- Landing Illusions
- Flicker Vertigo
- Disorientation and causes
- Motion Sickness
- Respiration
- Hypoxia and Prevention
- Hyperventilation
- Decompression Sickness
- Alcohol, Drugs and Effects on Performance

### AERONAUTICAL DECISION MAKING AND JUDGMENT

- Aeronautical Decision Making
- SRM
- Decision Making Process
- Pilot in Command Responsibility
- Hazardous Attitudes
- Communication
- Resource Use
- Workload Management
- Situational Awareness

#### LESSON COMPLETION STANDARDS

Demonstrate knowledge of the Physiological factors affecting the pilot in flight, human factors concepts, CRM principles and their effects on flight safety by a written or oral quiz.

#### ASSIGNED READING

Review Title 14 CFR Parts 1, 61, 91 and NTSB Part 830.

## LESSON 5 REGULATIONS PERTAINING TO COMMERCIAL PILOT OPERATIONS

#### **OBJECTIVES**

⇒ To introduce the regulations of particular importance to commercial pilot operations and to review NTSB Part 830.

#### TITLE 14 CFR

- Part 1
- Part 61
- Part 91

#### **NTSB**

— Part 830

#### LESSON COMPLETION STANDARDS

Demonstrate understanding of the regulations by a written or oral quiz.

#### ASSIGNED READING

Review for Stage Exam.

#### LESSON 6 STAGE EXAM

#### **OBJECTIVES**

⇒ To administer and review the Stage 1 Exam covering all material in Lessons 1 to 5.

#### **LESSON COMPLETION STANDARDS**

The student must pass the Stage 1 exam with a minimum score of 80% and the instructor will review each incorrect response to ensure complete understanding before the student progresses to the next stage. An endorsement confirming that the student has achieved a minimum grade of 80% will be placed in the student's file.

#### ASSIGNED READING

Read material on high performance power-plants in appropriate texts.

STAGE 2

#### HIGH PERFORMANCE AND COMPLEX AIRCRAFT SYSTEMS

Lessons 7-10

5.0 hours (approx) of ground training

#### Stage 2 Objectives

In this stage the student will be introduced to high performance airplane systems and environmental and ice control systems. The student will review information relating to the safe operations of complex aircraft and high performance aircraft systems.

#### Stage 2 Completion Standards

To complete this stage the student must pass a stage exam with a minimum score of 80%. The instructor will review each incorrect response with the student to ensure complete understanding before the student progresses to the next stage.

#### LESSON 7

#### HIGH PERFORMANCE POWERPLANTS

#### **OBJECTIVES**

⇒ To understand the operation of fuel injection and high performance engine systems and constant speed propellers.

#### **HIGH PERFORMANCE POWERPLANTS**

- Fuel Injection Systems
- Starting Procedures
- Normal Starts
- Hot Starts
- Flooded Starts
- Engine Monitoring
- Exhaust Gas Temperature Gauge
- Cylinder Head Temperature Gauge
- Abnormal Combustion
- Induction Icing

#### **TURBOCHARGING**

- Turbocharging Principles
- System Operation
- High Altitude Performance

#### **CONSTANT-SPEED STANDARDS**

- Propeller Principles
- Constant Speed Propeller Operations
- Power Controls

#### **LESSON COMPLETION STANDARDS**

Understanding of the material will be demonstrated by a written or oral guiz administered by the instructor.

#### ASSIGNED READING

Review aircraft environmental and ice control systems in appropriate texts.

#### ...

#### LESSON 8

#### **ENVIRONMENTAL AND ICE CONTROL SYSTEMS**

#### **OBJECTIVES**

⇒ To understand the operation of aircraft environmental control systems and the operations and limitations of ice control systems.

#### **OXYGEN SYSTEMS**

- Continuous flow
- Diluter Demand
- Pressure Demand
- Oxygen Storage
- Oxygen Servicing

#### **CABIN PRESSURIZATION**

- Operating Principles
- Pressurization Principles
- Pressurization system Components
- Pressurization Emergencies

#### ICE CONTROL SYSTEMS

- Airfoil Ice Control
- Windshield Ice Control
- Propeller Ice Control
- Other Ice Control Systems

#### **LESSON COMPLETION STANDARDS**

Demonstrate an understanding of aircraft environmental and ice control systems by completing a written or oral quiz.

#### ASSIGNED READING

Review retractable landing gear systems in the appropriate texts.

## LESSON 9 RETRACTABLE LANDING GEAR SYSTEMS

#### **OBJECTIVES**

⇒ To understand the operation and limitations of retractable landing gear systems.

#### RETRACTABLE LANDING GEAR SYSTEMS

- Landing Gear Systems
- Gear System Safety
- Airspeed Limitations
- Operating Procedures
- Gear System Malfunctions'
- Emergency Gear Extension

#### LESSON COMPLETION STANDARDS

Demonstrate an understanding of retractable landing gear systems by a short written or oral quiz.

#### ASSIGNED READING

Review all material covered in this stage in preparation for the Stage 2 exam.

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#### LESSON 10 STAGE 2 EXAM

#### **OBJECTIVES**

⇒ To administer and review the Stage 2 Exam covering all material in Lessons 7 to 9.

#### LESSON COMPLETION STANDARDS

The student must pass the Stage 2 exam with a minimum score of 80% and the instructor will review each incorrect response to ensure complete understanding before the student progresses to the next stage. An endorsement confirming that the student has achieved a minimum grade of 80% will be placed in the student's file.

#### **ASSIGNED READING**

Review advanced aerodynamics and theory of flight in the appropriate texts.

STAGE 3

ADVANCED AERODYNAMICS, AIRCRAFT PERFORMANCE AND COMMERCIAL
PILOT DECISION MAKING

Lessons 11-17

15.0 hours (approx) of ground training

#### Stage 3 Objectives

The student will review aerodynamics, aircraft performance calculations and pilot decision making as it relates to commercial flight operations.

#### Stage 3 Completion Standards

To complete this stage the student must pass a stage exam with a minimum score of 80%. The instructor will review each incorrect response with the student to ensure complete understanding before the student progresses to the next stage. In addition, the student must successfully pass the end of course exam with a minimum grade of 80% before being given an endorsement for the FAA Commercial Pilot Knowledge Examination.

### LESSON 11 ADVANCED AERODYNAMICS

#### **OBJECTIVES**

⇒ To relate the theory of flight to the performance of airplanes.

#### FOUR FORCES IN FLIGHT

- Lift
- Lift equation
- Controlling Lift
- High Lift Devices
- Drag
- Induced Drag
- Parasitic Drag
- Ground Effect
- Thrust
- Weight and Load Factor
- Vg Diagram

#### AIRCRAFT STABILITY

- Static
- Dynamic
- Longitudinal
- Lateral
- Directional

#### AERODYNAMICS AND FLIGHT MANEUVERS

- Straight and Level flight
- Climbs
- Glides
- Turns
- Turns
- Stall and Spin Awareness
- Stall causes and Types
- Stall Recognition and Recovery
- Spin causes and Phases
- Spin Recovery

#### LESSON COMPLETION STANDARDS

Demonstrate an understanding of the material covered by the completion of a written or oral quiz.

#### **ASSIGNED READING**

Review aircraft performance calculations in the appropriate texts and Pilot Operating Handbooks.

### LESSON 12 AIRCRAFT PERFORMANCE

#### **OBJECTIVES**

⇒ To develop the ability to use the Pilot's Operating Handbook and other information in calculating aircraft performance.

#### FACTORS AFFECTING PERFORMANCE

- Density Altitude
- Surface Winds
- Weight
- Runway Conditions

#### THE PILOT'S OPERATING HANDBOOK

- Performance Charts
- Takeoff charts
- Climb Performance Charts
- Cruise Performance Charts
- Descent Charts
- Landing distance Charts
- Glide Distance
- Stall Speeds

#### WEIGHT AND BALANCE

- Weight and Balance Limitations
- Center of Gravity Limits
- Weight and Balance Documents
- Weight and balance Computations
- Weight and balance Condition Checks
- Computations Method
- Graph Method
- Table Method
- Weight Shift Computations

#### **LESSON COMPLETION STANDARDS**

Demonstrate the ability to calculate aircraft performance by the completion of a written or oral quiz.

#### ASSIGNED READING

Review the techniques for performing maximum takeoffs and landings and other high performance commercial maneuvers in the appropriate texts and POH.

#### LESSON 13

## PERFORMANCE TAKE OFFS, LANDINGS AND COMMERCIAL PILOT MANEUVERS

#### **OBJECTIVES**

⇒ To understand the techniques to perform maximum take offs and landings, steep turns and the performance of the commercial pilot maneuvers.

### MAXIMUM PERFORMANCE TAKEOFFS AND LANDINGS

- PTS standards
- Soft Field
  - Take off and Climb
  - Procedure
  - Approach and Landing
- Short Field
  - Take off and Climb
  - Procedure
  - Approach and Landing
- Combined Procedure

#### **STEEP TURNS**

- PTS standards
- Definition and Procedure

#### **CHANDELLES**

- PTS standards
- Definition and Procedure

#### LAZY EIGHTS

- PTS standards
- Definition and Procedure

#### **EIGHT ON PYLONS**

- PTS standards
- Definition and Procedure

#### **LESSON COMPLETION STANDARDS**

Demonstrate and understanding of the material covered in this lesson by means of a written or oral quiz.

#### **ASSIGNED READING**

Review emergency procedures in the appropriate texts.

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## LESSON 14 EMERGENCY PROCEDURES

#### **OBJECTIVES**

⇒ To understand the procedures for various emergencies that may arise under commercial VFR operations.

#### **EMERGENCY PROCEDURES**

- Emergency Descent
- Emergency Approach and Landing
- In-Flight fire
- Partial Power Loss
- Door Opening In Flight
- Asymmetric Flap Extension
- Emergency Equipment and Survival Gear

#### LESSON COMPLETION STANDARDS

Demonstrate understanding of the material by the completion of a written or oral quiz.

#### **ASSIGNED READING**

Review commercial decision making in the relevant texts.

## LESSON 15 COMMERCIAL DECISION MAKING

#### **OBJECTIVES**

⇒ To understand the decision making process in commercial flight operations and to discuss aeronautical decision making and crew resource management and flight safety.

#### COMMERCIAL DECISION MAKING

- Commercial Operation
- The decision making process
- SRM
- Hazardous Attitudes
- Crew Relationships
- Communications
- Barriers to Effective Communications
- Resource Use
- Internal and External Resources
- Workload Management
- Planning and Preparation
- Prioritizina
- Situational awareness
- Controlled Flight Into Terrain

#### LESSON COMPLETION STANDARDS

Knowledge of the material will be demonstrated by a written or oral quiz.

#### **ASSIGNED READING**

Review all stage 3 material in preparation for the stage 3 exam.

#### LESSON 16 STAGE 3 EXAM

#### **OBJECTIVES**

⇒ To administer and review the Stage 3 Exam covering all material in Lessons 11 to 15.

#### **LESSON COMPLETION STANDARDS**

The student must pass the Stage 3 exam with a minimum score of 80% and the instructor will review each incorrect response to ensure complete understanding before the student progresses to the next stage. An endorsement confirming that the student has achieved a minimum grade of 80% will be placed in the student's file.

#### **ASSIGNED READING**

Review all course material in preparation for the end of course exam and FAA knowledge test.

#### LESSON 17 END OF COURSE EXAM

#### **OBJECTIVES**

- ⇒ To demonstrate knowledge and understanding of the material covered in this course in preparation for the FAA commercial pilot airplane knowledge test.
- ⇒ The student will complete a comprehensive written test to include all knowledge areas found in the FAA commercial pilot airplane knowledge test.

#### **LESSON COMPLETION STANDARDS**

The student must pass the end of course exam with a minimum grade of 80%. The instructor will review all incorrect responses to ensure complete understanding of the material before endorsing the student for the FAA commercial pilot airplane knowledge test.

The instructor will provide the student with an endorsement to write the FAA commercial pilot airplane knowledge test on the completion of all the requirements of this course and meeting the completion standards of Lesson 17.