LIST OF EFFECTIVE PAGES

LIST OF EFFECTIVE PAGES Cont'd

LIST OF EFFECTIVE PAGES Cont'd

Intentionally Left Blank

TABLE OF CONTENTS

TABLE OF CONTENTS Cont'd

TABLE OF CONTENTS

Intentionally
Left
Blank

Record of Revision Changes

Number	Date of Revision	Reason for Change	Pages
0riginal	June 05, 2011	Original Issue entire manual.	1-63
Rev 01	October 01, 2011	Corrections and updates	1,2,7,9,11,13,14,16,17, 21,22,23,24,31,49,62,63,64
Rev 02	January 15, 2012	Entire manual revision	1-81
Rev 03	May 10, 2012	diagram 12 & completion record	1,2, 9, 61,81
Rev 04	October 10, 2012	Merged ground and flight TCO's	1-110
Rev 05	April 15, 2013	Update of TCO	1,2,5,6,7,8,9,12,13,14,15, 17-22,49,50,51,60,62-71, 74-90,103,104,106-110
Rev #6	December 01, 2013		1,2,3,7,8,9,12,13,14,15,17-21, 22, 23-49, 51, 53-58,59,60,63,65, 66,67,71,75,79,80,81,85,88,89, 90-106
Rev#7	November 17, 2014	Chief Flight Instructor change	1,2,3,9,22
Rev #8	January 07, 2015	Entire TCO Revision/update	1 - 105

Record of Revision Changes cont'd

Number	Date of Revision	Reason for Change	Pages

Intentionally Left Blank

Private Pilot Certification Course - Airplane Single-Engine Land

1. North Star Aviation Inc., located at Mankato Regional Airport, Mankato, Minnesota is owned and operated as:

North Star Aviation, Inc.

3030 Airport Road North

Mankato, Minnesota 56001

2. **COURSE TITLE**: Private Pilot Certification Course - Airplane Single-Engine Land.

3. This TCO meets all of the curriculum requirements for the Private Pilot Certification Course contained in Appendix B of 14 CFR Part 141. These curriculum contents are intended to parallel the Private Pilot Airplane Single-Engine Land Practical Test Standards (PTS).

4. The training syllabus herein contains a separate ground training course and a flight training course which can be taught concurrently or separately. Separately will be defined as starting the ground course prior to or on the same day as the flight training course.

5. **COURSE OBJECTIVE**: The student will obtain the knowledge, skill and aeronautical experience necessary to meet the requirements for a private pilot certificate with an airplane category rating and a single-engine land class rating.

6. **COMPLETION STANDARD:** The student must demonstrate through written tests, practical tests, and through appropriate records that he/she meets the knowledge, skill and experience requirements necessary to obtain a Private Pilot Certificate with an airplane category rating and a single-engine land class rating. Each student should satisfactorily complete at least one stage of training within 100 days or the Chief Flight Instructor may terminate you from the program. Students that are inactive for more than 180 days may be terminated from the course. The Chief Flight Instructor may terminate the student for other reasons such as academic failure of the ground school, poor attendance of the scheduled flight labs or any other reason the Chief Flight Instructor determines valid.

7. **GROUND INSTRUCTIONAL FACILITIES:** Ground instruction facilities are located at North Star Aviation, Inc. in the Terminal Building at Mankato Regional Airport, and Armstrong Hall at Minnesota State University Mankato Campus.

A. The training space at North Star Aviation Inc. in the terminal building at Mankato Regional Airport consists of the student briefing area is 36’ by 46’ and consists of instructor cubicles with tables, 36” x 36” dry erase boards, aeronautical charts, including the current FAR AIM. North Star Aviation, Inc. has the following resources available to the students; a Garmin 430/530 computer based simulator, Poster of Aircraft Instrument panel, Bicycle wheel, model airplane, instrument gauges, computer, monitor, and keyboard. North Star Aviation, Inc. also has a conference room that is 30’ x 24‘ available for class room training and consists of a VCR player, DVD player, TV, Overhead projector, Grease Board , HP 61-110 projector and extendable projection screen. The room has nine 5 foot tables with each table able to handle two students...The space in the room can handle up to 12 tables and 24 students. (Diagram 1, Appendix A)

B. The training Rooms in Armstrong Hall at Minnesota State University Mankato Campus rooms consists of a Sharp Data Projector, Crestron Control System, Elmo Document Camera, Sony DVD/VCR Combo, Laptop Hookup, and a dry erase board or chalk board. (See Floor Plans in Diagram 2, 3 & 4, Appendix A)The room numbers, square footage and corresponding capacities are listed below:

ROOM	STUDENT CAPACITY	ROOM SQUARE FOOTAGE
Room 302	33	503
Room 303	36	669
Room 304	43	674
Room 305	48	762
Room 306	58	881
Room 308	42	644
Room 309	40	733
Room 310	32	501
Room 311	41	653
Room 314	40	764
Room 315	34	671
Room 316	44	664
Room 317	30	501
Room 319	33	500
Room 320	32	665
Room 321	38	671
Room 322	35	765
Room 323	58	881
Room 325	30	502
Room 326	25	502
Room 327	26	528
Room 330	43	882
Room 331	30	740
Room 332	10	673
Room 333	30	669
Room 334	33	501
Room 202	33	504
Room 203	27	665
Room 204	27	670
Room 205	40	761
Room 208	40	650
Room 209	36	741
Room 211	42	650
Room 213	55	882
Room 214	50	761
Room 215	38	581
Room 216	40	763
Room 217	33	503
Room 219	33	505
Room 220	40	761
Room 221	28	581
Room 222	50	770
Room 225	30	522
Room 231	50	762
Room 232	44	668
Room 233	42	668
Room 101	161	1539
Room 102	112	1282
Room 123	42	633

C. The training rooms at both locations are well lighted and the temperature is thermostatically controlled. Each room is well ventilated and conforms to the city of Mankato building, sanitation and health codes. The rooms are designed and located so that students will not be distracted by instruction conducted in the other rooms or by flight and maintenance operations at the airport.

8. **AIRPORT:** Mankato Regional Airport is the main operations base for training in this course. All flight training originates from this airport. Mankato Regional Airport has hard surfaced runways and meets the requirements of Section 141.38 of the FAR for day and night flight operations. The airport has fuel services available for North Star Aviation customers from Monday through Friday 0700 – 1800, and Saturday and Sunday 0700 through 1700 local. Maintenance is available Monday through Friday 0700 – 1700. The Waseca airport (KACQ) will be used as an alternative student pilot solo takeoff and landing practice area after an initial solo flight has been accomplished at the Mankato airport (KMKT) as needed. This will be used on an on demand basis with no more than 1 student pilots assigned to the Waseca airport for solo takeoff and landings. The student Pilot will receive a log book endorsement for repeated solo cross country after having flown to and from each airport. Procedures to get to and from Waseca airport in (ALPHA) designated practice area and other practice areas can be reviewed in the KMKT Practice Areas in **Appendix A – Diagram 8**

9. **AIRPORT FACILITIES:** The Mankato Regional Airport is equipped with two flight briefing areas. These areas are located in the airport's terminal. Both briefing areas are equipped with Televent DTN and a telephone is also available with the number posted on how to dial the Minneapolis Automated Flight Service Station (AFSS). These facilities are used by students and regular customers of North Star Aviation. The student briefing area is 36' by 46' and consists of instructor cubicles with tables, dry erase boards, aeronautical charts, including the current FAR AIM. North Star Aviation, Inc. also has a conference room that is 30' x 24' available for class room training and consists of a VCR player, DVD player, TV, Overhead projector, Grease Board , HP 61-110 projector and extendable projection screen. The room has nine 5 foot tables with each table able to handle two students. The space in the room can handle up to 12 tables and 24 students. The facilities are used exclusively by students, air taxi pilots, aircraft salesmen, transient pilots, and regular customers of North Star Aviation, Inc. The local practice areas are shown and described on a detailed chart posted on the wall in the dispatch area. A safety information board is maintained on the wall next to dispatch and a monitor can be viewed by students at the dispatch area with continuous updated KMKT local airport weather conditions

10. **Simulation Training**: Two **Redbird FMX 1000** Advanced Aviation Training Devices (AATD) may be used as an additional training aid. for simulation training. No time that logged in the Redbird will be accredited to the Private pilot training course. They are both located in one room that is 30' x 24' with two 36 'x 36" dry erase boards on the walls'. The Redbird FMX 1000 features an electric motion platform, fully enclosed cockpit, wrap around exterior visuals, quick change cockpit configurations for single and multi- engine, traditional and glass cockpit, center and left side control, compatible with headset, defined mission compatible with scenario based training, complete terrain and airport database, instructor station inside cockpit, and standard 110 power source. Each simulator is equipped with a Garmin 430 and a Garmin 530 avionics package. A copy of FAA letter of authorization can be found in **Appendix A** – Diagram 5.

11. **AIRCRAFT:** PA- 28 fixed gear, non-complex airplanes can be used for all flight training in this course. This aircraft type will meet the requirements of 14 CFR Part 141.39. Radio equipment will consist of at least one 360 channel transceiver and at least one VOR navigational receiver and a 4096 code transponder with Mode C capability. The PA- 28, airplanes are equipped for day and night VFR and IFR flying as specified in 14 CFR Part 91.205 (a) (b) (c) (d).

12. **CHIEF FLIGHT INSTRUCTOR:** The Chief Flight Instructor shall meet 14 CFR Part 141.35 requirements and hold at least a Commercial Pilot Certificate in a Single and Multi -Engine Airplane. The Chief Flight Instructor must be the holder of a flight instructor certificate with an airplane category rating with a single-engine and multi-engine class rating and an instrument airplane rating. The Chief Ground Instructor will also hold an Advanced Ground Instructor rating and an Instrument Ground Instructor rating. Duties: Conduct initial and annual qualification checks of flight instructors, document all delegations of duties, certification of training records, graduation certificates, stage and final test reports, stage and final test recommendations as to pass or recommendations for additional training. The Chief Flight Instructor will be available for consultation if not in the office by cell phone, telephone, email and/ or text. The Chief Flight Instructor will maintain overall responsibility of the flight school training program**.**

13. **ASSISTANT CHIEF FLIGHT INSTRUCTOR(S):** The Assistant Chief Flight Instructor(s) will meet the 14 CFR Part 141.36 requirements and hold at least a Commercial Pilot Certificate in a single engine and multi-engine airplane. The Assistant Chief Flight Instructor must be the holder of a flight instructor certificate with an airplane category rating with a single-engine and multi-engine class rating and an instrument airplane rating. Delegated Duties: Conduct initial and annual qualification checks of flight instructors, stage and final test recommendations as to pass or recommendations for additional training. The Assistant Chief Instructor will also help review certification of training records, graduation certificates, stage and final test reports. The Assistant Chief Flight Instructors will be available for consultation if not in the office by cell phone, telephone, email and / or text. **.**

14. **SENIOR CHECK INSTRUCTORS:** Each Senior Check Instructor will meet the requirements of a Check Instructor. Each Senior Check Instructors training file will note the approved courses they may perform student stage checks, end of course tests, and instructor proficiency checks.

15. **CHECK INSTRUCTORS:** Each Check Instructor under 14 CFR Part 141.37 must be the holder of at least a Commercial Pilot Certificate in a single- engine airplane and multi-engine airplane. The Check Instructor must be the holder of a flight instructor certificate with an airplane category rating with a single-engine and multi-engine class rating and an instrument airplane rating. Each Check Instructors training file will note the approved courses they may perform student stage checks and end of course tests.

16. **FLIGHT INSTRUCTORS:** Each Flight Instructor assigned to this course must be the holder of at least a commercial pilot certificate in a single- engine airplane and multi-engine airplane. The instructor must be the holder of a flight instructor certificate with an airplane category rating with a single-engine airplane rating. Train according to the course syllabus and document training in student training record. Each Flight Instructor will insure all student training records for their assigned Students are kept in good order and in accordance with the NSA record keeping plan.

17. **CHIEF GROUND INSTRUCTOR:** The Chief Ground Instructor will hold an Advanced Ground Instructor rating and an Instrument Ground Instructor rating. The Chief Ground Instructor for the Private Pilot Ground School Course, Instrument Pilot Ground School Course, Commercial Pilot Ground School Course will meet the requirements of 14 CFR Part 141.35 (e) .

18. **GROUND INSTRUCTORS:** The ground instructors for this course will meet the requirements under 14 CFR Part 141.81, holding either an Advanced Ground Instructor or Certified Flight Instructor rating to teach the Private Pilot and Commercial Pilot ground course. For ground instruction for the Instrument rating the ground instructor will hold an Instrument Ground Instructor or Certified Flight Instructor Instrument Airplane rating. Duties: Train according to the course syllabus and document training in each student's ground school training record.

The ground instructors will document ground instruction of each student attending a class. This will be accomplished electronically or by an attendance roster completed by each faculty ground instructor of each student's attendance in class. Should a student fail to attend a class, the session must be made up by a North Star Aviation, Inc. ground instructor. Each class attendance roster during a week will be entered into Electronic record keeping system by the ground instructor or his/her assistant by no later than the following Monday. All signed attendance sheets will be delivered by the Following Tuesday To the Senior Dispatcher with verification that all records are up to date in the Electronic system. This will be the process for the following courses:

- Private Pilot Ground School Course
- Instrument Pilot Ground School Course
- Commercial Pilot Ground School Course

19**. Dispatcher:** A Dispatcher may release training flights. The dispatcher will be given training on how to enter aircraft information, student information, review student flight log books for appropriate endorsements if necessary, review currency, print dispatch release, and required pilot documents. Training will be documented in each dispatchers training file. The dispatcher will understand maintenance due dates and help coordinate with maintenance inspections coming due with aircraft availability.

20. **Ground Course Testing:** The following ground training courses:

- ☐ Private Pilot Ground School Course
- ☐ Instrument Pilot Ground School Course
- ☐ Commercial Pilot Ground School Course

will have at least three stage exams Each of the 3 exams will be instructor created and will represent the content that was covered within the stage. The method of testing should represent a method of testing that is currently in practice for the FAA knowledge test, however, it is not limited to that method.

A student that fails to receive a passing grade on any stage exam may continue with the next stage provided the original stage exam is passed within the next 30 days.

21. **Additional Required Flight Training:** Additional flight training if needed may be performed in the Redbird FMX 1000 Advanced Aviation Training Devices (AATD).

22. **The following reference books and reference material s may be used in this course:**

AIM	Aeronautical Information Manual
FAR's	Federal Aviation Regulations
FAR's	Federal Aviation Regulations EXPLAINED by Kent Jackson
FAA-H-8083-25A	Pilot's Handbook of Aeronautical Knowledge
FAA-H-8083-1A	Aircraft Weight and Balance Handbook
FAA-H-8083-3	Airplane Flying Handbook
FAA-H 8083-6	Advanced Avionics Handbook
FAA-H-8083-15	Instrument Flying Handbook
FAA-H-8083-19	Plane Sense
AC 00-6	Aviation Weather
AC 00-45G	Aviation Weather Services
AC 60-22	Aeronautical Decision Making
AC 61-65	Certification: Pilots and Flight Instructors
AC 61-67	Stall and Spin Awareness Training
AC 61-84	Role of Preflight
AC 90-23E	Aircraft Wake Turbulence
AC 90-48C	Pilot's Role in Collision Avoidance
AC 90-66A	Recommended Standard Traffic Patterns and Practices for Aeronautical Operations at Airports without Operating Control Towers
AC 91-33A	Use of Alternate Grades of Aviation Gasoline for Grade 80/87, and use of Automotive Gasoline
AC 91-51A	Effect of Icing on Aircraft Control and Airplane Deice and Anti-ice Systems
AC 91-67	Minimum Equipment for General Aviation Operations under FAR Part 91
AC 120-51	Crew Resource Management Training
AC 00-54	Pilots Windshear Guide
AC 00-24B	Thunderstorms
AC 00-34A	Aircraft Ground Handling and Servicing
AC 20-43C	Aircraft Fuel Control
AC 20-73A	Aircraft Ice Protection
AC 43-9C	Maintenance Records
AC 43-12A	Preventative Maintenance

The Garmin GNS 430 A Pilot Friendly Manual by Jon Dittner
POH / AFM Pilot Operating Handbooks / Aircraft Flight Manuals (Various Manufactures)
FAA Airport Facility Directory
Private Pilot Practical Test Oral Study Guide instructor version with answers & explanations – by June Bonesteel
Everything Explained for Professional Pilots by Richie Lengel
Aircraft Systems for Pilots by Dale De Remer, Phd
ASA Private Pilot Oral Exam Guide
Jeppesen Guided Flight Discovery Private Pilot Book
Jeppesen GFD Private Pilot Video Series on DVD
Jeppesen Private Pilot CD-ROM (for a power point presentation)
Gleim Private Pilot Written Test Bank
FAA Private Pilot Practical Test Standards
North Star Aviation, Inc. Private Pilot ASEL Power Point Standardized Flight Training Presentation – Warrior III PA-28-161
North Star Aviation, Inc. Standard Operating Procedures - Piper Aircraft Warrior III PA-28-161
North Star Aviation, Inc. Preflight Power Point Presentation on the Piper Aircraft Warrior III PA-28-161
North Star Aviation, Inc. Checklist for the Piper Aircraft Warrior III PA-28-161

VTS, Inc. VTS Training Systems Piper Warrior and Piper Seminole aircraft systems training software
Garmin's 400 and 500 Series online flight simulator
Garmin's 400W and 500W Series downloadable flight simulator
Garmin's 500 Series downloadable flight simulator
Jeppesen's Garmin 430 and Garmin 530 Training Software

In addition at the discretion of the instructor, they may refer to any supplemental source of information (Advisory Circulars and other FAA publications) in order to increase the quality of the training along with NASA training videos, FAA Safety Videos and internet based AOPA Air Safety Foundation web based safety training may be used.

23. **Flight Lesson Grading**

S	Task accomplished meets lesson completion standards
I	Incomplete needs additional training
PC	Previously completed.
NP	Not Performed

- For a lesson to be Completed all items on that lesson must be signed off with an "S"
- When a lesson is flown a second or more times to complete, any items that were completed on previous flights of that lesson shall be marked with PC indicating that the item was previously completed.
- In the case where items were not trained or not performed on that flight the instructor will mark those items with "NP" indicating not performed. These "NP" items must be marked with an "S" on Subsequent flights to complete the lesson.
- In the event a student receives a **"I"** (Incomplete & Needs Additional Training) in a lesson.
    1. For a lesson to be completed all items on the lesson must have been graded with an "S".
    2. The instructor must give additional ground or flight training in the area a "I" was given, on the next training session for that lesson.

3. The additional training will be documented by dispatching the lesson again and only the items that were graded with "I" shall be flown on that lesson all other items will be marked PC. Place an "S" in the box if completion standards are met or another "I". If an "I" is given the lesson will remain open until all items on the lesson meet the completion standards. If the lesson items need to be flown more than 2 times the lesson must reviewed with the Chief Flight Instructor or Assistant Chief Flight Instructor before further flights are conducted. Once an "S" mark is received in all items of the lesson the lesson will then be complete.
4. Students may not progress to the next lesson until the lesson is completed
5. If an item on the lesson is marked with and NP the lesson will remain open until all items on the lesson have been graded with an "S".
6. Lessons with items that are labeled "if aircraft equipped" may be graded "NP" in the case where the aircraft of Flight trainer are not equipped to perform the procedure. In this case the lesson will be considered complete with only those items graded "NP".

24**. Enrollment**

As required in 14 CFR Part 141.93 (a) a copy will be defined as: A written copy, emailed copy, an electronic copy in a PDF format that may be distributed to the student through a central download site or delivered through an electronic means.

25. **Graduation**

The Chief Flight Instructor may reduce flight training requirements of this training course outline provided, 14 CFR Part 141 Appendix B Private Pilot Certification Course requirements have been complied with, and the exception is documented in the students file. Reductions are only allowed for areas where this Training Course Outline exceeds the requirements of 14 CFR Part 141.

26. **Documentation of student flight time**

Effective January 1, 2015 All students enrolling in a certification course will have their records maintained electronically in the North Star Aviation electronic training record system. The electronic format will also require an electronic backup file of the training data. All lessons in the electronic system will reflect the TCO presented here and all flights will be tracked to the corresponding lesson flown. Each lesson will be electronically signed by the Student and Instructor who conducted the lesson. Each time a lesson is flown it will be individually dispatched to show exactly what was taught on each flight will follow the grading system described in item 23 above.

PRIVATE PILOT CERTIFICATION COURSE AIRPLANE SINGLE-ENGINE LAND FLIGHT LESSON LAYOUT

	Total	DUAL	SOLO	DUAL X-C	SOLO X-C	NIGHT	INST	FLT TRAINER	
	44.9	**34.9**	**10**	**6.5**	**5.5**	**3**	**3.3**	**0**	
LESSON	DUAL	DUAL	SOLO	DUAL X-C	SOLO X-C	NIGHT	INST	FLT TRAINER	PRE & POST
1									2
2	1	1							1
3	1.5	1.5							0.5
4									2
5	1.5	1.5							0.5
6	1.5	1.5							0.5
7	1.5	1.5							0.5
8	1.5	1.5							0.5
9	1.5	1.5					0.3		0.5
10									2
11	1.5	1.5					0.3		0.5
12	3	3					0.2		0.5
13	0.5		0.5						0
14									2
15	1.5	1.5					0.3		0.5
16	1.5	1.5					0.2		2.5
Stage Total	18	17.5	0.5	0	0	0	1.3	0	16
17	0								2
18	1.5	1.5					0.3		0.5
19	1.5	1.5							0.5
20									2
21	1.5	1.5		1.5					0.5
22	1		1						0.5
23	2	2		2			0		0.5
24	1.5		1.5						0.5
25									2
26	3	3		3		3	0.3		0.5
27	2.2		2.2		2.2				0.5
28	1.5	1.5					0.3		0.5
29	3.3		3.3		3.3				0
30	1.5		1.5		0				0.3
31	1.5	1.5					0.3		0.5
32	1.5	1.5					0.3		0.5
33	0	0					0		2
34	1.7	1.7					0.3		0.3
35	1.7	1.7					0.2		3
Stage Total	26.9	17.4	9.5	6.5	5.5	3	2	0	17.1
Step Total	44.9	34.9	10	6.5	5.5	3	3.3	0	33.1

***** Pre & Post ground briefing in the flight training program are recommended amounts of time and may be less than 33.1 total hours.**

STAGE ONE - SOLO FLIGHT

17.5 HOURS DUAL
0.5 HOURS SOLO
1.3 HOURS INSTRUMENT DUAL
16 HOURS PRE/POST

1. **STAGE ONE OBJECTIVES:** The student will be instructed in the basic flying procedures and skills necessary to operate an aircraft solo in today's modern airspace system and in a technologically advanced aircraft.

2. **STAGE ONE COMPLETION STANDARDS:** The stage will be completed when the student satisfactorily passes the Stage One check and is able to conduct solo flights safely.

PRE & POST GROUND LESSON 1

2.0 HOURS TOTAL PRE & POST GROUND BRIEF

LESSON REFERENCES:

Federal Aviation Regulations (FARs)
Part 61.87 (a) thru (d), 61.89,
Airplane Flying Handbook FAA-H-8083-3A
Chapters 1 thru 3

North Star Aviation Inc. Approved Safety Procedures an Practices Manual

Aircraft Pilot Operating Handbook

North Star Aviation Inc. Preflight Power Point Presentation

North Star Aviation Inc. Standard Operating Procedures for the training aircraft

LESSON OBJECTIVES:

This lesson serves to acquaint the student with beginning Stage 1 training subject matter and operating procedures of the Flight school. Each element is to be briefly discussed and introduced to the student to familiarize them with the subject matter.

ACADEMIC CONTENT:

SAFETY PROCEDURES AND PRACTICES MANUAL

- ☐ Safety Procedures & Practices Manual in each Aircraft
- ☐ Safety Management System

PREFLIGHT PREPARATION AND PROCEDURES

- ☐ How to Complete Dispatch Paper Work
- ☐ Certificates and Documents (AROW)
- ☐ Operating Limitations to Include Placards and STC's
- ☐ Airworthiness Requirements (inspections, AD's etc)
- ☐ Verify how Student can Verify all Iinspections are in Compliance at NSA
- ☐ FAR 91.203 & 205
- ☐ POH Sections 2, 3, & 4 Assign Reading for Next Lesson
- ☐ Power Point Preflight Inspection
- ☐ Fuel Grades

AERODYNAMICS

- ☐ Left Turning Tendencies
- ☐ 4 Forces Acting on the Airplane
- ☐ Axes of the Airplane and Rotation Around
- ☐ Visual Flight References (S&L Normal Climb Pitch)
- ☐ Trim (emphasis Trim Off Pressure)
- ☐ Rudders (emphasis on Coordination)
- ☐ Dynamic and Static Stability to a Private Level

FEDERAL AVIATION REGULATIONS

FAR 61 Subpart A- General

- ☐ 61.3 Requirements for Certificates, Ratings, and Authorizations
- ☐ 61.23 Medical Certificates: Requirement and Duration
- ☐ 61.51 Pilot Logbooks

Subpart C-Aircraft ratings & pilot authorizations (student pilots)

- ☐ 61.87 Solo Requirements for Student Pilots
- ☐ 61.89 General Solo Limitations

AEROMEDICAL OVERVIEW

- ☐ Middle Ear And Sinus Problems
- ☐ Motion Sickness
- ☐ Carbon Monoxide Poisoning
- ☐ Stress And Fatigue
- ☐ Effects Of Alcohol And Drugs

COMPLETION STANDARDS:

Through oral quizzing and demonstration the student shall show understanding of terms and required study material for the Stage 1 training; further the student will have introductory knowledge of the safety practices and dispatch procedures of North Star Aviation (NSA).

STUDY ASSIGNMENT:

Read material on each subject of Aeromedical. POH Sections 2, 3, & 4 Airplane Flying Handbook FAA-H-8083-3A Chapters 1 thru 3, North Star Aviation Inc. Approved Safety Procedures and Practices Manual, NSA PA28-161 Preflight power point.

FLIGHT LESSON 2

1.0 HOUR TOTAL FLIGHT TIME
OF WHICH:
1.0 HOUR DUAL FLIGHT
1.0 PRE/POST BRIEFING

LESSON OBJECTIVES:

The student will be introduced to all preflight procedures through post flight procedures. During the flight phase the student will be introduced to the fundamentals of flight with emphasis on safe operations of the aircraft during all phases of flight.

INTRODUCE:

PREFLIGHT PREPARATION

- ☐ Pilot Certificates and Documents
- ☐ Weather Briefing with CFI
- ☐ Weight & Balance Calculation with CFI
- ☐ Practice Area Selection
- ☐ V-Speeds

PREFLIGHT PROCEDURES

- ☐ Preflight Inspection
- ☐ Aircraft Servicing Oil and Fueling
- ☐ Cockpit Management
- ☐ Before Taxi Checks
- ☐ Engine Starting and Warm Up
- ☐ Taxiing and Taxi Procedures
- ☐ Aircraft Run-up
- ☐ Pre-takeoff Briefing
- ☐ Before takeoff Checks

TAKEOFFS AND LANDING

- ☐ One Normal Takeoff and Climb
- ☐ One Traffic Pattern
- ☐ One Normal Approach and Landing
- ☐ Radio Communications - CFI

SAFETY RELATED OPERATIONS AND PROCEDURES

- ☐ Use of the Checklist
- ☐ Crew Resource Management
- ☐ Positive Exchange of the Flight Controls
- ☐ Visual Scanning and Collision Avoidance
- ☐ Pre-maneuver Checklist and Clearing Turns
- ☐ Runway Incursion Avoidance

BASIC & PERFORMANCE MANEUVERS

- ☐ Straight-and-Level Flight-explain use of Horizon
- ☐ Climbs and Descents from S & L – Emphasize Horizon
- ☐ Turns up to 30° – Emphasize VR Site Picture
- ☐ Climbing and Descending Turns
- ☐ Dynamic & Static Stability Demo- keep it fun!
- ☐ How to Correctly Trim the Aircraft at Various Airspeeds
- ☐ Power Settings for Key Airspeeds- Note Trim Changes Each Time
- ☐ Rudder & Aileron Coordination Maneuvers

POST FLIGHT PROCEDURES

- ☐ After Landing Checklist
- ☐ Parking and Securing the Aircraft
- ☐ Post Flight Inspection

COMPLETION STANDARDS:

From instructor demonstration and some student practice the student will have basic knowledge of the operational controls of the aircraft and will be able to use the trim, ailerons and rudders in various flight pitch and bank attitudes. Student will be able to assist the instructor in basic ground operations including taxiing the aircraft.

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

Study assignment: *Review POH Sections 2,3,4, & 7, Airplane Flying Handbook Chapters 4, & 5*

FLIGHT LESSON 3

1.5 HOUR TOTAL FLIGHT TIME
OF WHICH:
1.5 HOUR DUAL FLIGHT
0.5 PRE/POST BRIEFING

LESSON OBJECTIVES:

Student will continue to develop their ability to perform dispatch and preflight process. The student will review the basic flight characteristics of the airplane, will expand their ability to control the aircraft through coordination of turns, pitch and power settings to achieve airspeeds during climbs and descents. Continue to develop the skill of pitch and bank control with outside sky and ground references. Introduce steep turns, slow flight and stalls.

REVIEW:

PREFLIGHT PREPARATION

- [ ] Pilot Certificates and Documents
- [ ] Weather Briefing with CFI
- [ ] Weight & Balance Calculation with CFI
- [ ] Practice Area Selection
- [ ] Review V-Speeds

PREFLIGHT PROCEDURES

- [ ] Preflight Inspection
- [ ] Aircraft Servicing Oil and Fueling
- [ ] Cockpit Management
- [ ] Engine Start, Before Taxi, Taxi, Run-up, Before Takeoff Checks Completed
- [ ] Taxi & Pre-takeoff Briefing

BASIC & PERFORMANCE MANEUVERS

- [ ] Straight-and-Level Flight Emphasis Horizon
- [ ] Turns at different Bank Angles VR Site Picture
- [ ] Climbs and Descents-Varied Power and Trim
- [ ] Climbing and Descending Turns-VR Site Picture
- [ ] Trim of the Aircraft at Various Airspeeds
- [ ] Proper Rudder Use When Entering and Rolling Out of Turns, Climbs and Descents.

INTRODUCE

STEEP TURNS & SLOW FLIGHT

- [ ] Steep Turns (45 degrees)-VR Site picture
- [ ] Use Power and Trim Going thru 30 Degrees
- [ ] Flight at Various Drag Configuration
- [ ] Maneuvering Slow Flight at Various Airspeeds

TAKEOFF AND LANDING-CFI perform student follow

- [ ] One Normal Takeoff and Climb
- [ ] Traffic Pattern
- [ ] One Normal Approach and Landing
- [ ] Radio Communications CFI & Student perform

COMPLETION STANDARDS:

With limited instructor assistance the student will be able to perform: all ground operations of the flight, a normal take off with good directional control and establish a normal climb out pitch attitude. Turns at varied bank angles including steep turns all coordinated and roll out to specific outside references. heading +-15°, altitude +-150 ft.

Post Flight Review & Preview Next Lesson

Study Assignment: *Airplane Flying Handbook Chapter 6 through turns about a point.*

PRE & POST GROUND LESSON 4

2.0 HOURS TOTAL GROUND BRIEF

LESSON REFERENCES:

Federal Aviation Regulations (FARs) Part 61 & 91
Aircraft Pilot Operating Handbook
North Star Aviation Inc. Preflight Power Point
North Start Aviation Standard Operating Procedure Warrior III
Mid-Continent Pilot's Guide for the 4300 Series Electric Attitude Indicator with Battery Backup
Aircraft Pilot Operating Handbook
Airplane Flying Handbook FAA-H8083-3A
Private Pilot Practical Test Standards (PTS) FAA-S-8081-14BS (current date)
Airmen Information Manual (AIM)
AC 00-54 Pilots Windshear Guide
AC 90-23E Aircraft Wake Turbulence
AC 61-67 Stall & Spin Awareness Training
AC 90-48C Pilot's Role in Collision Avoidance

LESSON OBJECTIVES:

This lesson will introduce more general knowledge items that are needed to become a solo pilot. Special emphasis will be placed on operating safety both on the ground and in the air. Instructor will use reality based scenarios to begin to develop application level knowledge of all pre-solo items as well as acquaint them with risk assessment process.

ACADEMIC CONTENT:

PREFLIGHT PREPARATION AND PROCEDURES

- ☐ Ground briefing of Differences between Avidyne, G500, and Standard 6 pack Aircraft, Emphasis on Pre/Post Flight considerations (Electric Attitude Shutdown Procedure) Run-up Differences, Stby Alternator Version, AHRS, ADC, etc…
- ☐ POH Sections 5, 6, 7, 8, & 9
- ☐ V-Speeds
- ☐ Review Aircraft Preflight Inspection for Understanding of Why Each Item is Inspected. (Difference Between Checklist vs. Do List.)
- ☐ Aircraft Fuel Servicing Procedures (Self Service)
- ☐ Fuel & Oil Grades & Types

PREFLIGHT PLANNING

- ☐ Weight and Balance
- ☐ Take Off Performance
- ☐ Landing Performance

WEATHER

- ☐ Reading METAR, TERMINAL FORECAST, NOTAM'S, TFR'S

SAFETY RELATED OPERATIONS AND PROCEDURES

- ☐ Use of Checklists
- ☐ IM SAFE CHECKLIST
- ☐ Crew Resource Management
- ☐ Positive Exchange of Flight Controls
- ☐ Stall/Spin Awareness
- ☐ Visual Scanning
- ☐ Collision Avoidance
- ☐ Low Level Wind Shear
- ☐ Wake Turbulence
- ☐ Crosswind Taxiing

FEDERAL AVIATION REGULATIONS

FAR 61 Subpart E- Private pilots

- ☐ 61.103 Eligibility Requirements
- ☐ 61.105 Aeronautical Knowledge
- ☐ 61.107 Flight Proficiency
- ☐ 61.109 Aeronautical Experience
- ☐ 61.113 Private Pilot Privileges and Limitations

FAR 91 Subpart A- General

- ☐ 91.3 Responsibility and Authority of the PIC
- ☐ 91.7 Civil Aircraft Airworthiness
- ☐ 91.9 Flight Manual, Marking, and Placard Requirements
- ☐ 91.15 Dropping Objects
- ☐ 91.17 Alcohol or Drugs

Ground Reference Maneuvers

- ☐ Fly a Straight Line (explain crabbing & sideslip)
- ☐ Rectangular Course, S-Turns, Turns-Around-Point

GARMIN 430 GPS SIMULATOR

- ☐ Desktop Computer Simulator Training-(Go to Sim room and check it out)

COMPLETION STANDARDS:

Through oral quizzing and other instructor selected evaluation methods the student will demonstrate understanding of the preflight and dispatch process. Complete application of the North Star Aviation Inc. Safety Procedures and Practices Manual for the pilot training program, and pass the Safety written test with a 70% score.

STUDY ASSIGNMENT:

Review Ground Lesson 1 & 4
Review GARMIN 430 GPS Simulator.

FLIGHT LESSON 5

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:
1.5 HOUR DUAL FLIGHT
0.5 PRE/POST BRIEFING

LESSON OBJECTIVES:

Student will now be able to perform all the review items with little instructor assistance. This lesson will introduce ground reference maneuvers and crosswind procedures including ground operations and takeoffs & landings.

REVIEW:

PREFLIGHT PREPARATION

- ☐ Pilot Certificates and Documents
- ☐ Weather Briefing with CFI
- ☐ Weight & Balance Calculation with CFI
- ☐ Practice Area Selection
- ☐ Review of V-Speeds

PREFLIGHT PROCEDURES

- ☐ Preflight Inspection
- ☐ Cockpit Management
- ☐ Engine Start, Before Taxi, Taxi, Run-up, Before Takeoff Checks Completed.
- ☐ Taxi & Pre-takeoff Briefing

TAKEOFF AND LANDING

- ☐ Traffic Pattern
- ☐ Normal Approaches &Landings
- ☐ Radio Communications – Student Does Comm on the Ground

INTRODUCE:

- ☐ Use of Carb Heat and Mixture
- ☐ Airspeed Changes/Angle of Attack Relationships
- ☐ Flap Use & How it Changes Angle of Attack
- ☐ Glides and Gliding Turns
- ☐ Slow Flight Altitude Changes
- ☐ Power Off Stalls –Gliding & Power On Recovery
- ☐ Power on Stalls – Straight & Turning

Advanced Ground Operations Taxiing

- ☐ Crosswind Taxiing
- ☐ Emphasis on Taxi Speed

GROUND REFERENCE MANEUVERS

- ☐ Tracking a Straight Line over the Ground
  **Fly along a road to show crab, follow with side slip to show crosswind landing technique*
- ☐ Rectangular Course
- ☐ S-Turns
- ☐ Turns Around a Point

POST FLIGHT PROCEDURES

- ☐ After Landing Checklist
- ☐ Parking and Securing the Aircraft
- ☐ Post Flight Inspection

COMPLETION STANDARDS:

Student should demonstrate the ability to preflight the aircraft with no assistance from CFI (CFI oversight continues) Student can correctly perform x-wind taxi procedures on all ground ops. Flight operations altitude ± 150 ft., heading ±15^{o}. Ground reference and tracking should be coordinated and maintain safe operations throughout the maneuver.

Post Flight Review & Preview Next Lesson

FLIGHT LESSON 6

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:
1.5 HOUR DUAL FLIGHT
0.5 PRE/POST BRIEFING

LESSON OBJECTIVES:

This lesson will have the student further develop their skills to enter into a controlled glide to precision outcomes. The student will learn decent rates associated with different airspeeds they will also learn how increased bank angle greatly increases the decent rate. Associating all of this information to losing an engine on takeoff as well as knowing why the targeted Vg airspeed is crucial anytime we have an engine loss situation.

REVIEW:

PREFLIGHT PREPARATION

- ☐ Pilot Certificates and Documents
- ☐ Weather Briefing with CFI
- ☐ Weight & Balance Calculation with CFI
- ☐ Practice area Selection
- ☐ Review of V-Speeds

PREFLIGHT PROCEDURES

- ☐ Preflight Inspection
- ☐ Cockpit Management
- ☐ Engine Start, Before Taxi, Taxi, Run-up, Before Takeoff Checks Completed.
- ☐ Taxi & Pre-takeoff Briefing

TAKEOFF AND LANDING

- ☐ Traffic Pattern
- ☐ Normal Approaches & Landings
- ☐ Radio Communications - Student does comm the ground

ADVANCED GROUND OPERATIONS TAXIING

- ☐ Crosswind Taxiing
- ☐ Emphasis on Taxi Speed

INTRODUCE:

- ☐ Trim While Setting up for a Glide
- ☐ Demonstrate Decent Rate at Varied A/S
- ☐ Start at Cruise and Work Down from there
- ☐ Take any A/S and Increase Bank Angle up 45^{o}
- ☐ Settle in on Vg and then Work All Bank Angles
- ☐ Have Student Stabilize all Glides with Trim

RREVIEW:

GROUND REFERENCE MANEUVERS

- ☐ Rectangular Course
- ☐ S-Turns
- ☐ Turns Around a Point

POST FLIGHT PROCEDURES

- ☐ After Landing Checklist
- ☐ Parking and Securing the Aircraft
- ☐ Post Flight Inspection

COMPLETION STANDARDS:

Student should demonstrate the ability to preflight the aircraft with no assistance from CFI (CFI oversight continues). Student can correctly perform x-wind taxi procedures on all ground ops. Flight operations altitude ± 150 ft., heading $\pm 15^{o}$. Ground reference and tracking should be coordinated and maintain safe operations throughout the maneuver. Student will be able to trim the aircraft, reduce the power and establish a glide at the specified A/S. They will also be able to demonstrate glides with turns maintaining A/S so as not to significantly increase descent rate.

Post Flight Review & Preview Next Lesson

FLIGHT LESSON 7

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:
1.5 HOURS DUAL FLIGHT
0.5 PRE/POST BRIEFING

LESSON OBJECTIVES:

The student will now perform all preflight and dispatch functions on their own with the instructor observing all tasks. This lesson will introduce the traffic pattern at altitude simulating a complete traffic pattern.

Definition of Aerial Traffic Pattern: The CFI will have the student fly an altitude simulating a downwind of a traffic pattern at least 3000 feet AGL. The CFI will have the student slow to 90 kts. on downwind and run the appropriate before landing check list and BC-GUMP checklist. The CFI will then have the student reduce the power to 1700 RPM, put 10° flaps down, slow to 80 kts. and begin a descent at 500 fpm. The student will then turn 90° to the left simulating a base leg of the traffic pattern. The student will then put in 25° of flaps down and slow to 75 kts. Student will turn again 90° to the left simulating final approach. The student will then put in 40° of flaps and slow to 70 kts, continue to descend at 500 fpm until 1,000 feet below the initial starting altitude. At this time the student will perform the go around procedures climbing back to the original altitude and airspeed.

REVIEW:

PREFLIGHT PREPARATION

- ☐ Pilot Certificates and Documents
- ☐ Weather Briefing Student Performs
- ☐ Weight & Balance Calculation Student Performs
- ☐ Practice area selection

PREFLIGHT PROCEDURES

- ☐ Preflight Inspection

PERFORMANCE MANEUVER

- ☐ Steep Turns (45 Degree Bank)

SLOW FLIGHT AND STALLS

- ☐ Maneuvering Slow Flight Various Airspeeds
- ☐ Power-Off Stall Straight and Turning
- ☐ Power-On Stall Straight and Turning
- ☐ Spin Awareness Knowledge (Do not Spin)

GROUND REFERENCE MANEUVERS

- ☐ Tracking a Straight Line over the Ground
- ☐ Rectangular Course
- ☐ S-Turns
- ☐ Turns Around a Point

INTRODUCE :

Aerial Traffic Patterns

- ☐ Aerial Traffic Pattern
- ☐ Go-Around/Rejected Landing Procedures

TAKEOFF, LANDING

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Radio Communication - Student Performs all Radio Calls

POST FLIGHT PROCEDURES

- ☐ After Landing
- ☐ Parking and Securing the Aircraft
- ☐ Post Flight Inspection

COMPLETION STANDARDS:

Student should perform all review maneuvers with little instructor assistance and should maintain all altitudes ± 150 ft. and heading ± 15° Aerial pattern will be completed once the student can perform 3 full patterns with no instructor coaching or assistance.

FLIGHT LESSON 8

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:
1.5 HOURS DUAL GIVEN
0.5 PRE/POST BRIEFING

LESSON OBJECTIVES:

This lesson will allow the student to further develop their skills in aircraft control. This will be done by reviewing select maneuvers previously taught and continuing practice at altitude with the aerial pattern. Emergency procedures of all types including loss of power on the downwind should be practiced here.

Note: Forward slips (with and without flaps) will be introduced during the final approach phase of the Aerial Traffic Pattern.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

PERFORMANCE MANEUVER

- ☐ Steep Turns (45° Bank)

AERIAL TRAFFIC PATTERN

- ☐ Aerial Traffic Pattern (Slow Flight)
- ☐ Go-Around/Rejected Landing Procedure

TAKEOFFS, LANDINGS

- ☐ Normal and/or Crosswind Takeoff and Climb
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approach & Landing
- ☐ Radio Communication - Student Performs all Radio Calls

GROUND REFERENCE MANEUVERS

- ☐ Rectangular Course
- ☐ S-Turns
- ☐ Turns Around a Point
- ☐ Parallel Track a road*

**Flight along road to show crab, follow with side slip to show crosswind landing technique*

INTRODUCE:

EMERGENCY OPERATIONS

- ☐ Simulated Engine Failure after Takeoff
- ☐ Emergency Landing Off Airport
- ☐ Systems and Equipment Malfunctions
- ☐ Emergency Equipment and Survival Gear
- ☐ Forward Slip to a Landing with No Flaps

POST FLIGHT PROCEDURES

- ☐ After Landing Checklist
- ☐ Parking and Securing the Aircraft
- ☐ Post Flight Inspection

COMPLETION STANDARDS:

This lesson will be complete when the student can manage basic emergencies executing key items from memory and then following up with checklist. While managing emergency scenarios the student should maintain full aircraft control with altitude ±100 ft. and heading ±10$^{o.}$ Once student can perform 3 complete aerial patterns with no instructor assistance the student will be ready to move to the real traffic pattern.

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

ASSIGN: Safety Procedures & Practices Manual Open Book Test

FLIGHT LESSON 9

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:
1.5 HOURS DUAL GIVEN
.3 HOURS INSTRUMENT INSTRUCTION
0.5 PRE/POST BRIEFING

LESSON OBJECTIVES:

- During this lesson the student will practice and review maneuvers and procedures to maintain or gain proficiency.
- The student will be introduced to basic instrument maneuvers.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

TAKE OFFS AND LANDINGS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches & Landings
- ☐ Radio Communications Performed by Student
- ☐ Forward Slip to a Landing

GLIDES

- ☐ Glides at Varied Airspeeds (review why Vg)
- ☐ Gliding Turns

Perform at varied bank angle & varied speed noting rate of decent for a given airspeed

EMERGENCY OPERATIONS

- ☐ Simulated Off Airport Emergency Landing
- ☐ Pick 1: Partial Power, Oil Pressure, Engine Temp
- ☐ Systems and Equipment Malfunctions

AERIAL TRAFFIC PATTERN

- ☐ Aerial Traffic Pattern (Slow Flight)
- ☐ Go-Around/Rejected Landing Procedure

If patterns are performed to completion standards with no instructor coaching or assistance then you may proceed to airport for no more than 3 patterns. No landings, all patterns to low approach and may have slips and emergencies combined.

POST FLIGHT PROCEDURES

- ☐ After Landing Checklist
- ☐ Parking and Securing the Aircraft
- ☐ Post Flight Inspection

INTRODUCE:

BASIC INSTRUMENT MANEUVERS (IR – Instrument Reference)

- ☐ Straight-and-Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Speed Descents (IR)
- ☐ Turns to Headings (IR)
- ☐ Recovery from Unusual Attitudes (IR)

Perform this while enroute to and from practice area

EXAM

Safety Procedures & Practices Manual Open Book Test. Score ≥ 80% and corrected to 100%.

COMPLETION STANDARDS:

- At the completion of the lesson, the student will be able to identify equipment malfunctions, take action and maintain control of the aircraft.
- During the flight, the student should maintain heading ±10° and rollout from turns ±10° of assigned headings, and specified altitudes ±100 ft.
- Takeoffs and landings should be performed safely with a minimum of instructor assistance. During takeoff and landing, the student should demonstrate good directional control and maintain lift-off, climb, approach, and touchdown airspeed ±10 kts.
- The newly introduced maneuvers will be evaluated on technique, coordination and understanding.

PRE & POST GROUND LESSON 10

2.0 HOURS TOTAL GROUND BRIEF

LESSON REFERENCES:

Federal Aviation Regulations (FARs)
- Part 61 & 91

Aircraft Pilot Operating Handbook
North Star Aviation Inc. Safety Manual
North Star Aviation Inc. Preflight Power Point Presentation
North Star Aviation Standard Operating Procedure Warrior III
Aircraft Pilot Operating Handbook
Airplane Flying Handbook FAA-H8083-3A
Airmen Information Manual (AIM)

AC 00-54 Pilots Windshear Guide
AC 90-23E Aircraft Wake Turbulence
AC 61-67 Stall & Spin Awareness Training
AC 90-48C Pilot's Role in Collision Avoidance

LESSON OBJECTIVES:

This lesson will provide the time to review the POH, with emphasis on emergency procedures. The instructor will use realistic scenarios to continue to develop student's ability to apply all the procedures to meet the different emergencies. This will also allow for a review of any other open items prior to solo. Student should complete both open and closed book tests prior to this lesson to be gone over.

INTRODUCE

BASIC TO ADVANCED FLIGHT MANEUVERS

- ☐ Accelerated Stalls
- ☐ Trim Tab Stall (Takeoff or Go Around Scenario)
- ☐ Coordinated Flight

AERONAUTICAL DECISION MAKING

- ☐ Scenario for Wind Change While Soloing
- ☐ Checklists Complacency
- ☐ IM SAFE Checklist
- ☐ DECIDE

FEDERAL AVIATION REGULATIONS

FAR 61 Subpart E- PRIVATE PILOT

- ☐ 61.87 (a) thru (d) Eligibility Requirements

EMERGENCY PROCEDURES

- ☐ Pattern Emergencies
- ☐ Smoke Coming From the Instrument Panel
- ☐ Specks of Oil Appearing on Windscreen
- ☐ Birds Flocking on the Airport or Flying in the Area
- ☐ Engine Failure in Various Positions and Configurations
- ☐ Key Traffic Pattern Positions to Insure Making Your Field
- ☐ Use of Carb Heat and Mixture

TAKE OFFS AND LANDINGS

- ☐ Landings and Landing Techniques
- ☐ High Approach
- ☐ Bounced Landing
- ☐ Balloon Approach Landing
- ☐ Low Approach
- ☐ Touchdown Zone
- ☐ Airspeed and Power Relationships
- ☐ Crosswind Techniques
- ☐ Touchdown Procedures,
- ☐ Sight Picture
- ☐ Full Stop, Stop and Go, Touch and Go (stress what they do on Solo!)

(Flying Handbook Ch 7, 8,& 9 (steep turns))

COMPLETION STANDARDS:

Through oral quizzing and other instructor selected evaluation methods the student will demonstrate understanding of general scenarios that can arise in flight and how to make decisions to meet those situations. The student will further be able to discuss.

STUDY ASSIGNMENT:

Complete application of the North Star Aviation Inc. Safety procedures and Practices Manual for the pilot training program, and be able to pass the Safety written test with a 70% score. Complete the Pre-solo open and Closed book exam before next flight to be reviewed and graded on Flight Lesson 11.

FLIGHT LESSON 11

1.5 HOUR TOTAL FLIGHT TIME
OF WHICH:
1.5 HOUR DUAL GIVEN
0.3 HOURS INSTRUMENT INSTRUCTION
0.5 PRE/POST BRIEFING

LESSON OBJECTIVES:

- The flight instructor will evaluate the student's proficiency in the proper execution of the maneuvers and procedures listed below.

*__Note__: *Flight instructor will also document pre-solo written test scores in the Student Pilot Flight Folder Record.*

REVIEW:

PREFLIGHT PREPARATION
- ☐ Pilot Certificates and Documents
- ☐ Weather Briefing Student Performs
- ☐ Weight & Balance Calculation Student Performs
- ☐ Practice Area Selection

PREFLIGHT PROCEDURES
- ☐ Preflight Inspection
- ☐ Cockpit Management
- ☐ Engine Start, Before Taxi, Taxi, Runup, Before Takeoff Checks Completed
- ☐ Taxi & Pre-takeoff Briefing

SLOW FLIGHT AND STALLS
- ☐ Maneuvering during Slow Flight at Various Airspeeds
- ☐ Power-Off Stall
- ☐ Power-On Stall
- ☐ Spin Awareness (Do Not Spin)

PERFORMANCE MANEUVER
- ☐ Steep Turns 45° Bank

BASIC INSTRUMENT MANEUVERS **(IR – Instrument Reference)**
- ☐ Straight-and-Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Speed Descents (IR)
- ☐ Turns to Headings (IR)
- ☐ Recovery from Unusual Attitudes (IR)

Perform this while enroute to and from practice area

GROUND REFERENCE MANEUVERS
- ☐ S-Turns
- ☐ Turns Around a Point

AERIAL PATTERN
- ☐ Full Pattern Normal
- ☐ Emergency Scenario type
- ☐ High Approach Using Slip to Target

TAKEOFFS, LANDINGS AND GO-AROUNDS
- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches & Landings
- ☐ Radio Communications
- ☐ Forward Slip to a Landing
- ☐ Go-Around/Rejected Landing(s)

EMERGENCY OPERATIONS
- ☐ Emergency Landing Off Airport
- ☐ Systems and Equipment Malfunctions

POST FLIGHT PROCEDURES
- ☐ After Landing Checklist
- ☐ Parking and Securing the Aircraft
- ☐ Post Flight Inspection

EXAM
- ☐ **Written Open Book Pre Solo Test Score ≥ 80%**
- ☐ **Written Closed Book Pre Solo Test Score ≥ 70%**

COMPLETION STANDARDS:

- At the completion of this lesson, the student will be able to identify equipment malfunctions, take proper actions/decisions to meet the emergency/problem while maintaining control of the aircraft without instructor assistance.
- At the completion of the lesson, the student should maintain heading ±10° and rollout from turns ±10° of assigned headings, and specified altitudes ±100 ft.
- The student will demonstrate they understand how to enter, perform and exit maneuvers listed in this lesson.
- The student will understand how to recognize and react to emergency situations and system failures.
- Retake solo tests until test scores meet the required percentages.

FLIGHT LESSON 12

3.0 HOUR TOTAL FLIGHT TIME
OF WHICH:
3.0 HOURS DUAL GIVEN
0.2 HOURS INSTRUMENT INSTRUCTION
0.5 PRE/POST BRIEFING

LESSON OBJECTIVES:

- To provide the student the opportunity to review and gain added proficiency with an instructor prior to performing normal and/or crosswind takeoffs and landings to a full stop/taxi back during the students first solo flight.
- The Flight Instructor will review 3 takeoff and landings prior to endorsing:
    1. Student pilot logbook
    2. Student Pilot Certificate
    3. Student Flight Training Folder Record

Note: This lesson may be flown over multiple flights to completion. Good practice would be to spend no more than 45 minutes at a time in the pattern working on landings. The instructor will ensure the student receives the correct standardized endorsements prior to the solo flight.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

GROUND REFERENCE MANEUVERS (Choose at least 1)

- ☐ S-Turn, Turns Around a Point

BASIC INSTRUMENT MANEUVERS (IR – Instrument Reference)

- ☐ Straight-and-Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Speed Descents (IR)
- ☐ Turns to Headings (IR)

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Pattern Emergencies
- ☐ Slips to Landing
- ☐ Balloon Approach and Recovery
- ☐ Normal and/or Crosswind Approaches & Landings
- ☐ Radio Communications Performed by Student

POST FLIGHT PROCEDURES

- ☐ After Landing Checklist
- ☐ Parking and Securing the Aircraft
- ☐ Post Flight Inspection

COMPLETION STANDARDS:

- This dual lesson is completed when the student has conducted the assigned maneuvers and/or procedures, demonstrating after at least 3 unassisted takeoff and landings the student is ready to solo. Flight Lesson 12 will remain open until instructor endorses student for solo. This lesson may be flown multiple times until the sign off.

FLIGHT LESSON 13

0.5 HOUR TOTAL FLIGHT TIME
OF WHICH:
0 .5 HOURS SOLO FLIGHT

LESSON OBJECTIVES:

- To provide the student the opportunity to review and gain added proficiency while performing normal and/or crosswind takeoffs and landings to a full stop/taxi back during a solo flight under the direct supervision of an authorized instructor.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches &Landings
- ☐ Radio Communications

At least 3 solo takeoff and landings to a full stop with a taxi back for takeoff

COMPLETION STANDARDS:

- This lesson is completed when the student has completed a solo flight of at least 3 takeoff and landings under the supervision of an instructor.

PRE & POST GROUND LESSON 14

2.0 HOURS TOTAL GROUND BRIEF

LESSON REFERENCES:

Federal Aviation Regulations (FARs)
Part 61, 91
Airplane Flying Handbook Chapter 16
Emergency procedures

Approved Safety Procedures and Practices Manual

Aircraft Pilot Operating Handbook
VFR Omaha Sectional Chart

AC 00-54	Pilots Windshear Guide
AC 90-23E	Aircraft Wake Turbulence
AC 61-67	Stall & Spin Awareness Training
AC 90-48C	Pilot's Role in Collision Avoidance

LESSON OBJECTIVES:

- This lesson will review preflight preparation and procedures, preflight planning, and safety related operations and procedures. The lesson will also evaluate various aeronautical decision making scenarios and Federal Aviation Regulation sections 61 and 91.

ACADEMIC CONTENT:

PREFLIGHT PREPARATION AND PROCEDURES

- ☐ Certificates and Documents
- ☐ Airworthiness Requirements
- ☐ FAR 91.205
- ☐ How a Minimum Equipment List Works (MEL)
- ☐ Placard and Deactivate under FAR 91.213 (d) without an Approved MEL
- ☐ Review of POH Sections 2, 3, 4, 5, 6, & 7

PREFLIGHT PLANNING

- ☐ Weight and Balance
- ☐ Take Off Performance
- ☐ Landing Performance
- ☐ VFR Flight Plan For a Local Flight

STUDY ASSIGNMENT:

Review of Ground Lesson 1, 4, 9, 13
Stage test is cumulative of the Stage
AOPA Video "Do the right thing – Decision Making for Pilots.

SAFETY RELATED OPERATIONS AND PROCEDURES

- ☐ Use of Checklists
- ☐ IM SAFE Checklist
- ☐ Single Pilot Cockpit Resource Management
- ☐ Positive Exchange of Flight Controls
- ☐ Stall / Spin Awareness
- ☐ Visual Scanning
- ☐ **Collision Avoidance** *Note: verify these three elements*
- ☐ **Low Level Wind Shear** *are logged in student logbook*
- ☐ **Wake Turbulence**

AERONAUTICAL DECISION MAKING

- ☐ Scenario for Wind Change While Soloing
- ☐ Scenario for Stuck on Top Overcast Layer
- ☐ Scenario for Runway Closure & Diverting Airports
- ☐ Go/No Go Decisions (Weather, Aircraft, Personal)
- Discuss Accident Chain and the Cumulative Effect of the Pilot's Choices
- ☐ It All Started with Spilling the Coffee at Breakfast…

NAVIGATION

- ☐ Basics VOR Navigation To and From
- ☐ GPS Setup Closest Airport and Direct To

FAR 61

- ☐ Review Appropriate Sections of FAR 61

FAR 91 Subpart B- Flight rules

- ☐ 91.103 Preflight action
- ☐ 91.105 Flight Crewmembers at Stations
- ☐ 91.107 Use of Safety Belts & Shoulder Harnesses
- ☐ 91.111 Operating Near Other Aircraft
- ☐ 91.113 Right-of-Way Rules
- ☐ 91.119 Minimum Safe Altitudes
- ☐ 91.126 Operating On or In the Vicinity of an Airport in Class "G" Airspace
- ☐ 91.127 Operating On or In the Vicinity of an Airport in Class "E" Airspace
- ☐ 91.151 Fuel Requirements
- ☐ 91.155 VFR Weather Minimums

- ☐ FAR 91 Subpart A – Review Appropriate Sections

COMPLETION STANDARDS:

- The student will indicate through oral quizzing, familiarity with preflight preparation and procedures, preflight planning, safety related operations and procedures, aeronautical decision making and federal aviation regulation Parts 61 and 91.

FLIGHT LESSON 15

1.5 HOURS TOTAL FLIGHT Time
OF WHICH:
1.5 HOURS DUAL GIVEN
0.3 HOURS INSTRUMENT INSTRUCTION
0.5 PRE/POST BRIEFING

LESSON OBJECTIVES:

- The student will review basic instrument maneuvers.
- The student will be introduced to basic VOR navigation to and from a VOR.
- The student will continue to develop skill and judgment performing emergency approach and landing in the traffic and slips to landings

REVIEW:

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Crosswind Takeoff and Climb
- ☐ Crosswind Approaches & Landings
- ☐ Slip to a Landing
- ☐ Recovery From a Poor Approach
- ☐ Radio Communications

EMERGENCY OPERATIONS

- ☐ Systems and Equipment Malfunctions

PERFORMANCE MANEUVER

- ☐ Steep Turns 45° Bank

SLOW FLIGHT AND STALLS

- ☐ Maneuvering During Slow Flight at Various Airspeeds
- ☐ Power-Off Stall
- ☐ Power- On Stall
- ☐ Spin Awareness Knowledge (Do not Spin)

GROUND REFERENCE MANEUVERS (Choose at least 1)

- ☐ Rectangular Course, S-Turn, Turn Around a Point

BASIC INSTRUMENT MANEUVERS (IR – Instrument Reference)

- ☐ Straight-and-Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Speed Descents (IR)
- ☐ Turns to Headings (IR)
- ☐ Recovery from Unusual Attitudes (IR)

EMERGENCY OPERATIONS

- ☐ Emergency Landing Off Airport
- ☐ Engine Failure in the Pattern

INTRODUCE NAVIGATION

- ☐ Basics VOR Navigation To and From
- ☐ Basics GPS Navigation

COMPLETION STANDARDS:

- At the completion of this lesson, the student will be able to identify equipment malfunctions, take proper actions/decisions to meet the emergency/problem while maintaining control of the aircraft with some instructor assistance.
- During the flight, the student should maintain heading ±10°, rollout from turns ±10° of assigned headings, and hold specified altitudes ±100 ft.
- Takeoffs and landings should be performed safely with a minimum of instructor assistance. During takeoff and landing, the student should demonstrate good directional control and maintain lift-off, climb, approach, and touchdown airspeed ±10 kts.
- Student will show increased accuracy and coordination while operating under instrument reference.

STAGE CHECK 1 - FLIGHT 16

Stage Check 1

1.5 HOUR TOTAL FLIGHT TIME
OF WHICH:
1.5 HOUR DUAL GIVEN
0.2 HOURS INSTRUMENT INSTRUCTION
2.5 HOURS PRE/POST

LESSON OBJECTIVES:

- The Chief Flight Instructor, the Assistant Chief Flight Instructor or a Check Flight Instructor will evaluate the student's proficiency in the proper execution of the maneuvers and procedures listed below.

REVIEW:

PREFLIGHT PREPARATION

- ☐ Pilot Certificates and Documents
- ☐ Weather Briefing Student Performs
- ☐ Weight & Balance Calculation Student Performs
- ☐ Practice Area Selection

PREFLIGHT PROCEDURES

- ☐ Preflight Inspection
- ☐ Cockpit Management
- ☐ Engine Start, Before Taxi, Taxi, Runup, Before Takeoff Checks Completed

PERFORMANCE MANEUVER

- ☐ Steep Turns 45° Bank

SLOW FLIGHT AND STALLS

- ☐ Maneuvering During Slow Flight at Various Airspeeds
- ☐ Power Off Stall or Power On Stall
- ☐ Spin Awareness Knowledge (Do not Spin)

EMERGENCY OPERATIONS

- ☐ Emergency Landing Off Airport Scenario
- ☐ Systems and Equipment Malfunctions
- ☐ Simulated Pattern Emergency Scenario

BASIC INSTRUMENT MANEUVERS (IR – Instrument Reference)

- ☐ Straight-and-Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Speed Descents (IR)
- ☐ Turns to Headings (IR)
- ☐ Recovery from Unusual Attitudes (IR)

GROUND REFERENCE MANEUVERS (Choose at least 1)

- ☐ Rectangular Course, S-Turn, Turns Around a Point

NAVIGATION

- ☐ Basic VOR Navigation or Basic GPS Navigation

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoff and Climb
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approach & Landing
- ☐ Radio Communication Performed by Student
- ☐ Forward Slip to a Landing
- ☐ Go-Around/Rejected Landing Procedures

COMPLETION STANDARDS:

- At the completion of this lesson, the student will be able to identify equipment malfunctions, take proper actions/decisions to meet the emergency/problem while maintaining control of the aircraft.
- At the completion of the lesson, the student will perform all the maneuvers and procedures listed for review and demonstrate the student can safely operate the aircraft without a Flight Instructor on board. During takeoff and landing, the student should demonstrate good directional control and maintain lift-off, climb, approach, and touchdown airspeed ±10 kts.
- During the flight, the student should maintain heading ±10° and rollout from turns ±10° of assigned headings, and specified altitudes ±100 ft.

This Page Intentionally left blank

STAGE TWO - CROSS COUNTRY

17.4 HOURS DUAL INSTRUCTION
3.0 HOURS OF DUAL NIGHT INSTRUCTION
2.0 HOURS DUAL INSTRUMENT INSTRUCTION
9.5 HOURS SOLO
6.5 HOURS DUAL CROSS COUNTRY
5.5HOURS SOLO CROSS COUNTRY
17.1 Pre/Post Ground Instruction

STAGE TWO OBJECTIVES: In this stage, the student will increase his/her proficiency to a level, which is appropriate for the Private Pilot certificate by performing night operations, and cross-country flight during day and night conditions with his/her authorized Flight Instructor.

In addition, the applicant will increase his/her proficiency and meet the requirement as set forth by the FARs by performing additional solo flights. Towards the completion of this stage, the student will perform the first solo cross-country flight under the supervision of his/her authorized Flight Instructor. The student will be instructed in the conduct of night cross-country flight, night operations and compete 10 takeoff and landings to a full stop at an airport at night.

STAGE TWO COMPLETION STANDARDS: The stage will be completed when the student demonstrates through stage check, solo flight, and records that he/she can safely conduct solo cross country flight in an airplane using pilotage, dead reckoning, and radio navigation under VFR conditions, and is able to meet all requirements of the Private Pilot Single Engine Land Practical Test Standards. The student will have also completed the night training and instrument requirements in this stage.

PRE & POST GROUND LESSON 17

2.0 HOURS TOTAL GROUND BRIEF

LESSON REFERENCES:

Federal Aviation Regulations (FARs)
Part 91
AIM
Airplane Flying Handbook Chapter 8
Pilot's Handbook of Aeronautical Knowledge
Chapter 9, Weight & Balance
Chapter 15, Navigation

LESSON OBJECTIVES:

- This lesson will begin preparation for cross country flight operations. Topics covered in the briefing will include: equipment, procedures on how a Minimum Equipment List is used and how to obtain a Special Flight Permit. Using the FAR/AIM, Part 91, and Short & Soft Field takeoffs and landings.

ACADEMIC CONTENT:

EQUIPMENT

- ☐ Required Instruments for VFR Day and Night Operations
- ☐ Deferring Inoperative Components without a MEL (FAR 91.213 (d)) - Placarding Inoperative Equipment
- ☐ Placards Required
- ☐ Kinds of Operations Equipment List in POH
- ☐ Special Flight Permit (Ferry Permit)
- ☐ Aircraft Maintenance Logs - Determine Airworthiness
- ☐ Inspections – Annual, 100 hour, Transponder, Pitot/Static, ELT, ADs

FAR/AIM

- ☐ Chapter 1- VORs and GPS
- ☐ Chapter 4 – Services Available to Pilots
- ☐ Chapter 6 – Emergency Procedures
- ☐ Part 830

FAR 91 SUBPART B- FLIGHT RULES

- ☐ 91.117 Aircraft Speed
- ☐ 91.121 Altimeter Settings
- ☐ 91.123 Compliance with ATC Clearances and Instructions
- ☐ 91.125 ATC Light Gun Signals
- ☐ 91.129 Operations in Class D Airspace
- ☐ 91.130 Operations in Class C Airspace
- ☐ 91.131 Operations in Class B Airspace
- ☐ 91.133 Restricted and Prohibited Areas
- ☐ 91.155 VFR Weather Minimums
- ☐ 91.159 VFR Cruising Altitudes

SHORT & SOFT FIELD TAKE OFFS AND LANDINGS

- ☐ Approach Differences
- ☐ Obstacles and No Obstacles
- ☐ Airspeed
- ☐ Site Picture
- ☐ Aim Points

COMPLETION STANDARDS:

- This lesson will be complete after the instructor asks questions about the lesson and evaluates the student has an understanding of the lesson objectives.

STUDY ASSIGNMENT:

Airplane Flying Handbook Chapter 8
Short and Soft field takeoffs and landings

AOPA "Know before you go – Navigating today's airspace"

FLIGHT LESSON 18

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:
0.3 HOURS INSTRUMENT DUAL
1.5 HOURS DUAL GIVEN
0.5 PRE/POST

LESSON OBJECTIVES:

- During this lesson, fly to an airport away from KMKT. The student will have the opportunity prepare for a flight other than MKT.
- Additionally, the student will be introduced to short and soft field takeoff and landing techniques.
- The Instructor is encouraged to select one or two other airports within the area to practice the Short and Soft field take offs and landings: Authorized airports are any airport that is public use and listed in the AFD. Notify dispatch where you plan to go if you are going to another field. Airports need to be within 30 NM of MKT for lesson times.

***Note:** The only airport that is authorized for repeated solos is KACQ. To give this endorsement the instructor must have conducted this lesson KMKT to KACQ to MKT. It is optional if the instructor wants to allow the student to have this endorsement.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoff and Climb
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approach and Landing
- ☐ Radio Communications
- ☐ Go-Around/Rejected Landings

EMERGENCY OPERATIONS

- ☐ Emergency Approach and Landing
- ☐ Systems and Equipment Malfunctions
- ☐ Emergency Equipment and Survival Gear

INTRODUCE:

TAKEOFF AND LANDING AT ANOTHER AIRPORT

- ☐ Short Field Takeoff and Maximum Performance Climb
- ☐ Short Field Approach and Landing
- ☐ Soft Field Takeoff and Climb
- ☐ Soft Field Approach and Landing
- ☐ Go-Around/Rejected Landing
- ☐ Aeronautical Decision Making Related to Landings.

BASIC INSTRUMENT MANEUVERS (IR – Instrument Reference)

- ☐ Straight-and-Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Speed Descents (IR)
- ☐ Turns to Headings (IR)

This is a great time to practice a scenario that weather came down enroute and flew into the clouds for a few minutes. How to get out of the situation they just flew into.

COMPLETION STANDARDS:

- During the flight, the student should maintain heading ±10° and rollout from turns ±10° of assigned headings, and specified altitudes ±100 ft.
- At the completion of the lesson, the student will perform the short and soft field take-offs and landings safely with a minimum of instructor assistance.

- Student will be able to setup and complete Short and Soft field approach and landing consistent with the procedure outlined in the Airplane flying handbook and through use of good ADM practices make adjustments to insure safe landing is completed.

FLIGHT LESSON 19

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:
1.5 HOURS DUAL GIVEN
0.5 PRE/POST BRIEFING

LESSON OBJECTIVES:

This lesson will help the student to further develop their skills with landing the airplane using Short and Soft field techniques and there should be an effort to get to as strong as crosswind as practical to practice improving crosswind techniques.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Crosswind Takeoff and Climb
- ☐ Traffic Pattern
- ☐ Crosswind Approach and Landing
- ☐ Radio Communications
- ☐ Go-Around/Rejected Landings

EMERGENCY OPERATIONS

- ☐ Emergency Approach and Landing (in Pattern)
- ☐ Systems and Equipment Malfunctions
- ☐ Emergency Equipment and Survival Gear

TAKEOFF AND LANDING AT ANOTHER AIRPORT

- ☐ Short Field Takeoff and Maximum Performance Climb
- ☐ Short Field Approach and Landing
- ☐ Soft Field Takeoff and Climb
- ☐ Soft Field Approach and Landing
- ☐ Forward and Side Slips to Landings
- ☐ Go-Around/Rejected Landing

COMPLETION STANDARDS:

- At the completion of the lesson, the student will perform the crosswind, short and soft field take-offs and landings safely without instructor assistance.
- Short field touchdown +200 Feet – 0 Feet of specified point and demonstrate good decision making if the landing is not going as desired execute a go around to attempt again.
-
- Student will be able to setup and complete Short and Soft field approach and landing consistent with the procedure outlined in the Airplane flying handbook and through use of good ADM practices make adjustments to insure safe landing is completed.
-

PRE & POST GROUND LESSON 20

2.0 HOURS TOTAL GROUND BRIEF

LESSON REFERENCES:

Federal Aviation Regulations (FARs)
Part 61, 91

FAA Aeronautical Chart User's Guide
Airmen Information Manual
Airport Facilities Directory AFD
Pilot's Handbook of Aeronautical Knowledge
Chapter 9, Weight & Balance
Chapter 15, Navigation

VFR Sectional Chart

LESSON OBJECTIVES:

- This lesson will prepare the student for cross country flight operations. Topics covered in the briefing will include: VFR Sectionals, Terminal Area Charts, weather charts, performance calculations, planning flight logs and flight plans, filing, collecting flight planning material, weather and airspace. Procedures on how a Minimum Equipment List is used, deferring inoperative components and how to obtain a Special Flight Permit.

ACADEMIC CONTENT:

MANUAL E6B
- ☐ Ground and Air Usage

VFR SECTIONAL and TERMINAL AREA CHART
- ☐ Legend
- ☐ Symbols
- ☐ Airspace (Special Use)

AIRPORT FACILITIES DIRECTORY
- ☐ Legend, Effective Dates, and Use of

WEATHER
- ☐ METAR, TAF, FA WINDS ALOFT, PIREP'S
- ☐ AIRMET, SIGMET, CONVECTIVE SIGMET
- ☐ NOTAMS D, TFR'S, RADAR SUMMARY
- ☐ WEATHER DEPICTION, SURFACE ANALYSIS & FORECAST
- ☐ Weather Briefings Available to Pilots Using the Data Above

CROSS COUNTRY FLIGHT PLANNING
- ☐ Airport Facility Directory
- ☐ Developing a Route
- ☐ Pilotage/Dead Reckoning
- ☐ Radio Navigation
- ☐ Navigation Log
- ☐ Diverting
- ☐ Lost Procedures
- ☐ Air Traffic Control (ATC)
- ☐ Flight Following Procedures
- ☐ Tower Controlled Airports
- ☐ Light Gun Signals
- ☐ Flight Service Stations
- ☐ Flight Plan Form
- ☐ Filing a Flight Plan with FSS
- ☐ How to Activate and Cancel a Flight Plan
- ☐ Plan Your VFR Cross Country for Flight Lesson #21

FAA DUATS FLIGHT PLANNING
- ☐ Register Student Pilot for a DUATS Account
- ☐ Set up Aircraft Profile on DUATS
- ☐ Plan Lesson Cross Country Flight with Weather Briefing

COMPLETION STANDARDS:

- This lesson will be complete when the student is able to apply the fundamentals of a flight briefing and brief the instructor on the proposed flight presenting the instructor with a planned x-country that contains a plotted course an associated flight log with checkpoints for pilotage/dead reckoning use, with times to each point and destination, fuel logs and performance charts associated with takeoff and landing distances. Instructor will evaluate for reasonableness and accuracy of data calculations.

STUDY ASSIGNMENT:

The instructor will assign a cross-country flight with one leg at least 51 NM from point of departure to be conducted during Lesson 21.

AOPA Weather Wise: Thunderstorms & ATC
AOPA "GPS for VFR Operations"

FLIGHT LESSON 21

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:
1.5 HOURS DUAL CROSS COUNTRY
.5 HOURS PRE/POST

LESSON OBJECTIVES:

- Demonstrates additional proficiency in maneuvers to review and introduce cross country navigation during a planned cross-country flight.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Soft Field Takeoff and Climb
- ☐ Traffic Pattern
- ☐ Soft Field Approach and Landing
- ☐ Radio Communications
- ☐ Go-Around/Rejected Landing(s)
- ☐ Short Field Takeoff and Maximum Performance Climb
- ☐ Short Field Approach and Landing

INTRODUCE:

NAVIGATION

- ☐ Cross-Country Flight Planning
- ☐ Activating a VFR flight Plan and Canceling/Closing
- ☐ Pilotage
- ☐ Use of Navigation Systems – GPS Navigation
- ☐ Radar Services (Flight Following)
- ☐ Dead Reckoning
- ☐ Diversion
- ☐ Lost Procedures
- ☐ Radio-Communications and ATC light Signals
- ☐ Situational Awareness
- ☐ Aeronautical Decision Making
- ☐ Crew Resource Management

COMPLETION STANDARDS:

- During the preflight orientation, the student with the instructor's assistance should be able to conduct the flight accurately making use of all applicable FAA publications and weather analysis information.
- During the post flight evaluation, the student's level of proficiency will be determined by comparing the revised ETA to the ATA at each checkpoint. The difference should not be greater than ±5 minutes. The estimate for the destination should be ±10 minutes.
- Heading $\pm 10^{o}$ Altitude ±100 foot of assigned altitudes.

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

FLIGHT LESSON 22

1.0 HOURS TOTAL FLIGHT TIME
OF WHICH:
1.0 HOURS SOLO FLIGHT
0.5 HOURS PRE/POST

LESSON OBJECTIVES:

- To provide the student the opportunity to review and gain added proficiency while performing a minimum of normal and/or crosswind takeoffs and landings to a complete stop during a solo flight at another airport or at Mankato Airport (MKT) under the direct supervision of an authorized instructor.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches and Landings
- ☐ Radio Communications
- ☐ Short Field Takeoff and Maximum Performance Climb
- ☐ Short Field Approach and Landing
- ☐ Soft Field Take Off
- ☐ Soft Field Approach and Landing

COMPLETION STANDARDS:

- This lesson is completed when the student has conducted the assigned maneuvers and/or procedures with increased accuracy and coordination.

FLIGHT LESSON 23

2.0 HOURS TOTAL FLIGHT TIME
OF WHICH:
2.0 HOURS DUAL CROSS COUNTRY
1.5 HOURS PRE/POST

Note: *The instructor will assign a cross-country flight at least 50 NM.to an airport with an operating control tower.*

LESSON OBJECTIVES:

- Review and demonstrates additional proficiency in VFR navigation, during a planned cross-country flight. Introduce during this cross-country flight 2 takeoffs and landings to a full stop with taxi into FBO at an airport with an **operating control tower. Introduce ground control and taxi to the FBO, exit aircraft, go inside, return to aircraft for departure.**

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Short Field Takeoff and Climb
- ☐ Traffic Pattern
- ☐ Short Field Approach and Landing
- ☐ Radio Communications
- ☐ Go-Around/Rejected Landing(s)
- ☐ Soft Field Takeoff and Climb
- ☐ Soft Field Approach and Landing

NAVIGATION

- ☐ Cross-Country Flight Planning
- ☐ Activating a VFR flight Plan and Cancelation
- ☐ Pilotage
- ☐ Use of Navigation Systems – VOR Navigation for One Leg of Flight.
- ☐ Radar Services (Flight Following, Approach, Tower and Ground Controllers)
- ☐ Dead Reckoning
- ☐ Diversion
- ☐ Lost Procedures
- ☐ Situational Awareness
- ☐ Aeronautical Decision Making
- ☐ Crew Resource Management

INTRODUCE:

- ☐ Tower Controlled Airport – Radio communication
  - Request practice ATC light signals in pattern (Optional)

COMPLETION STANDARDS:

- During the preflight orientation, the student should be able to plan the flight accurately making use of all applicable FAA publications and weather analysis information with minimal instructor assistance.
- During the post flight evaluation, the student's level of proficiency will be determined by comparing the revised ETA to the ATA at each checkpoint. The difference should not be greater than ±5 minutes. The estimate for the destination should be ±10 minutes
- Heading $\pm 10^{o}$ Altitude $\pm$100 foot of assigned altitudes.
- The student will have a basic understanding of operations at an airport with an operating control tower.

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

FLIGHT LESSON 24

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:
1.5 HOURS SOLO FLIGHT
0.5 HOURS PRE/POST

LESSON OBJECTIVES:

- To provide the student the opportunity to review and gain added proficiency while performing a minimum of normal and/or crosswind takeoffs and landings to a complete stop during a solo flight at another airport or at Mankato Airport (MKT) under the direct supervision of an authorized instructor.

**Student will have the opportunity to fly either a local area flight or at the Instructor's option may choose to fly to a satellite airport of their choosing to practice and return to KMKT. In the event the instructor chooses to send the student to a different airport the instructor must sign off the flight as a solo cross country.*

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches and Landings
- ☐ Radio Communications
- ☐ Soft Field Takeoff and Climb
- ☐ Soft Field Approach and Landing

COMPLETION STANDARDS:

- This lesson is completed when the student has conducted the assigned maneuvers and/or procedures with increased accuracy and coordination.

PRE & POST GROUND LESSON 25

2.0 HOURS TOTAL GROUND BRIEF

LESSON REFERENCES:

Federal Aviation Regulations (FARs)
Part 91 & NTSB Part 830

FAA Aeronautical Chart User's Guide
Airplane Flying Handbook Chapter 10
AIM Chapter 2, 3 & 6

Pilot's Handbook of Aeronautical Knowledge
Chapter 9, Weight & Balance
Chapter 15, Navigation

VFR Omaha Sectional Chart

LESSON OBJECTIVES:

- This lesson will prepare the student for cross country night flight. Topics covered in the briefing will include: performance calculations, planning flight logs and flight plans, filing, collecting flight planning material, FAR 91 regulations, weather and airspace. Procedures on how to use DUAT'S to file a VFR flight plan, setting up flight planner and getting a weather briefing.

ACADEMIC CONTENT:

NIGHT FLYING

- ☐ Function And Parts Of The Eye
- ☐ Night Illusions
- ☐ Night Adaption
- ☐ Lighting of Aircraft
- ☐ Personal Lighting Equipment
- ☐ Airport Lighting

VFR SECTIONAL

- ☐ Legend
- ☐ Symbols
- ☐ Airspace identification & Weather Requirements

WEATHER

- ☐ METAR, TERMINAL AREA FORECAST, AREA FORECAST
- ☐ PIREP'S, WINDS ALOFT,
- ☐ AIRMET, SIGMET, CONVECTIVE SIGMET
- ☐ NOTAMS D, TFR'S
- ☐ RADAR SUMMARY,
- ☐ WEATHER DEPICTION, SURFACE ANALYSIS & FORECAST

CROSS COUNTRY FLIGHT PLANNING

- ☐ Airport Facility Directory
- ☐ Developing a Route
- ☐ Pilotage/Dead Reckoning
- ☐ Radio Navigation
- ☐ Navigation Log
- ☐ Diverting
- ☐ Lost Procedures
- ☐ Air Traffic Control (ATC)
- ☐ Flight Following Procedures
- ☐ Tower Controlled Airports
- ☐ Flight Service Stations
- ☐ Flight Plan Form
- ☐ Filing a Flight Plan
- ☐ Plan a VFR Cross Country

FAR 91 SUBPART - C

- ☐ 91.203 Aircraft Certifications Required
- ☐ 91.205 Equipment Requirements
- ☐ 91.207 Emergency Locator Transmitters
- ☐ 91.209 Aircraft Lights
- ☐ 91.211 Supplemental Oxygen
- ☐ 91.215 Transponder Usage

FAA DUATS FLIGHT PLANNING

- ☐ Student Gets Weather Data from DUATS
- ☐ Plan the Night X-C Flight with Weather Briefing

COMPLETION STANDARDS:

- This lesson will be complete after the instructor asks questions about lesson to evaluate the students understanding of the lesson objectives.

STUDY ASSIGNMENT:

Flight Training Handbook Chapter 10
AOPA "Weather Wise: Air Masses & Fronts
AOPA "Weather Wise: Ceiling & Visibility

FLIGHT LESSON 26

3 HOURS TOTAL FLIGHT TIME
OF WHICH:
.3 instrument (xc or local)
3 HOURS DUAL **NIGHT**
0.5 HOURS PRE/POST

Note: This flight can be flown as one cross country or as two separate flights. One flight must meet the cross country requirement outlined in C & D below. All remaining time can be done in the local area.

LESSON OBJECTIVES:

A. To introduce the student to flight maneuvers at **night** to gain added proficiency.
B. The student will increase his/her proficiency in dealing with systems and equipment malfunctions, to include electrical failure at night.
C. The student will meet the eligibility requirements set forth in FAR 141 Appendix B 4 (b) 1 (ii) by performing a minimum of 10 takeoffs and landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport.
D. Cross-country flight of more than 100 NM total distance with one leg straight line distance of more than 50 NM.
E. Gain additional proficiency in VFR navigation during a planned cross-country flight at night.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Safety-Related Operations and Procedures

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches and Landings
- ☐ Soft Field Take Offs and Landings
- ☐ Radio Communications
- ☐ Go-Around/Rejected Landing(s)

BASIC INSTRUMENT MANEUVERS **(VR – Instrument Reference)**

Recovery from Unusual Attitudes (VR)

EMERGENCY OPERATIONS

- ☐ Electrical Malfunctions and Failure
- ☐ Lost Communication Procedures and ATC Light Signals
- ☐ Systems and Equipment Malfunctions
- ☐ Emergency Equipment and Survival Gear

Ideas for Emergency Scenario's: Loss of electrical power: *Fly a pattern with no inside lights and on final no landing or recog lights. Make up a situation that power is lost and the flashlight is in the baggage compartment. Note the sounds of the airplane and the visual cues that are available. Discuss flying on a cool evening and having with frost on the wings. Another might be landing late at night and ground fog is covering or forming on the runway.*

INTRODUCE:

NIGHT OPERATION

- ☐ Night Preflight Procedures
- ☐ Night Flight Operations

NAVIGATION

- ☐ Cross-Country Flight Planning
- ☐ Pilotage
- ☐ Use of Navigation Systems and Radar Services
- ☐ Dead Reckoning
- ☐ Diversion
- ☐ Lost Procedures
- ☐ Radio-Communications and ATC light Signals
- ☐ Situational Awareness
- ☐ Aeronautical Decision Making
- ☐ Crew Resource Management

COMPLETION STANDARDS

- At the completion of the lesson, the student will be performing all night and navigation items to PTS standards
- Altitude $\pm$100 feet heading $\pm 10^{o}$ Turns to headings $+10^{o}$

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

FLIGHT LESSON 27

2.2 HOURS TOTAL FLIGHT TIME
OF WHICH:
2.2 HOURS SOLO CROSS COUNTRY
0.5 HOURS PRE/POST

LESSON OBJECTIVES:

- To provide the student the opportunity to review and gain added proficiency in navigation during a solo cross country flight.
- Solo cross-country flight, with full-stop landings at three points, and each **segment** of flight consisting of a straight line distance of more than 50 NM between takeoff and landing locations.

***Note:** The instructor will ensure the student has received the proper endorsements in his/her logbook and Student Pilot Certificate for initial cross country flight.*

Additionally, a flight instructor will review the student's preflight planning and preparation and attest to the correctness and preparedness of the student's cross country planning under the known circumstances in an additional logbook endorsement for that day only.

***Segment** means airport to airport*

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoff(s) and Climbs(s)
- ☐ Traffic Patterns
- ☐ Normal and/or Crosswind Approach(es) and Landing(s)
- ☐ 3 Take off and landings to a full stop at a operating control tower airport.
- ☐ Radio Communications

NAVIGATION

- ☐ Cross-Country Flight Planning
- ☐ Pilotage
- ☐ Use of Navigation Systems and Radar Services
- ☐ Dead Reckoning
- ☐ Diversion
- ☐ Lost Procedures
- ☐ Radio-Communications and ATC light Signals
- ☐ Situational Awareness
- ☐ Aeronautical Decision Making
- ☐ Crew Resource Management

Example: KMKT KRWF KOTG KMKT KMKT KRST KMCW KMKT

COMPLETION STANDARDS:

- The student should demonstrate an increase in proficiency and confidence in the use of VFR navigation techniques over unfamiliar terrain through the conduct of a solo cross country flight assigned by the instructor.
- This lesson is complete when the student has satisfactorily completed the solo cross country flight assigned by the instructor and performed 3 takeoff and landings at an airport with an operating control tower.
- During the preflight orientation, the student should be able to plan the flight accurately making use of all applicable FAA publications and weather analysis information.

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

FLIGHT LESSON 28

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:

1.5 HOURS DUAL GIVEN
0.3 HOURS INSTRUMENT INSTRUCTION
0.5 HOURS PRE/POST

LESSON OBJECTIVES:

- Review and gain adequate proficiency during the performance of the maneuvers and procedures covered in the previous lessons.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

PERFORMANCE MANEUVER

- ☐ Steep Turns

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches and Landings
- ☐ Radio Communications
- ☐ Forward Slip to a Landing
- ☐ Short Field Takeoff and Maximum Performance Climb
- ☐ Short Field Approach and Landing
- ☐ Soft Field Takeoff and Climb
- ☐ Soft Field Approach and Landing

EMERGENCY OPERATIONS

- ☐ Emergency Approach and Landing
- ☐ Systems and Equipment Malfunctions
- ☐ Emergency Equipment and Survival Gear

BASIC INSTRUMENT MANEUVERS (IR – Instrument Reference)

- ☐ Straight-and-Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Speed Descents (IR)
- ☐ Turns to Headings (IR)
- ☐ Recovery from Unusual Attitudes (IR)

COMPLETION STANDARDS:

- At the completion of the lesson, the student will perform all the maneuvers and procedures listed for review $\pm$100 feet $\pm 10^{o}$ heading, rollout from turns $\pm 10^{o}$ heading. Short field landings +200 foot -0 feet from designated touchdown point. All other maneuvers to PTS standards and performance methods.

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

FLIGHT LESSON 29

3.3 HOURS TOTAL FLIGHT TIME
OF WHICH:
3.3 HOURS SOLO CROSS COUNTRY

LESSON OBJECTIVES:

- To provide the student the opportunity to review and gain added proficiency in navigation during a solo cross country flight.
- Solo cross country flight of 150 nm distance with full-stop landings at three or more airports, and each **segment** of flight consisting of a distance of 50 NM or greater.
- At least one destination airport will have an **operating control tower** and 3 takeoff and landings will be performed by the student to a full stop.
- This lesson may be followed up by a shorter cross country if needed. (KMKT-KRWF-KMKT)

Additionally, a flight instructor will review the student's preflight planning and preparation and attest to the correctness and preparedness of the student's cross-country planning under the known circumstances in an additional logbook endorsement for that day only.

***Segment** means airport to airport*

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoff(s) and Climbs(s)
- ☐ Traffic Patterns
- ☐ Normal and/or Crosswind Approach(es) and Landing(s)
- ☐ Radio Communications

NAVIGATION

- ☐ Cross-Country Flight Planning
- ☐ Pilotage
- ☐ Use of Navigation Systems and Radar Services
- ☐ Dead Reckoning
- ☐ Radio-Communications
- ☐ Situational Awareness
- ☐ Aeronautical Decision Making
- ☐ Crew Resource Management

TOWER CONTROLLED AIRPORT

- ☐ Minimum of 3 full stop Takeoffs and Landings Required Between Lessons 27 and 29

Example: KMKT KFSD KMML KMKT

COMPLETION STANDARDS:

- The student should demonstrate an increase in proficiency and confidence in the use of VFR navigation techniques over unfamiliar terrain through the conduct of a solo cross country flight assigned by the instructor.
- This lesson is complete when the student has satisfactorily completed the solo cross country flight or flights assigned by the instructor.
- During the preflight orientation, the student should be able to plan the flight accurately making use of all applicable FAA publications and weather analysis information.

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

FLIGHT LESSON 30

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH:
1.5 HOURS SOLO FLIGHT
0.3 HOURS PRE/POST

LESSON OBJECTIVES:

- The student will review and gain proficiency during the performance of the maneuvers and procedures covered in this lessons.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

PERFORMANCE MANEUVER

- ☐ Steep Turns

SLOW FLIGHT AND STALLS

- ☐ Maneuvering During Slow Flight
- ☐ Power-Off Stall
- ☐ Power-On Stall

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches and Landings
- ☐ Radio Communications
- ☐ Short Field Takeoff and Maximum Performance Climb
- ☐ Short Field Approach and Landing
- ☐ Soft Field Takeoff and Climb
- ☐ Soft Field Approach and Landing
- ☐ Go-Around/Rejected Landing(s)
- ☐ Forward Slip on Approach with No Flaps

COMPLETION STANDARDS:

- At the completion of the lesson, the student will perform all the maneuvers and procedures listed for review $\pm$100 foot $\pm 10^{o}$ Heading rollout from turns $\pm 10^{o}$ heading. Short field landings +200 foot -0 from designated touchdown point. All other maneuvers to PTS standards and performance methods.
-

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

FLIGHT LESSON 31

1.5 HOURS TOTAL FLIGHT TIME
OF WHICH
1.5 HOURS DUAL GIVEN
0.3 HOURS INSTRUMENT INSRUCTION
0.5 HOURS PRE/POST

LESSON OBJECTIVES:

- Review and application of the maneuvers and procedures covered in this lesson in preparation for the Final Stage Check.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

PERFORMANCE MANEUVER

- ☐ Steep Turns

SLOW FLIGHT AND STALLS

- ☐ Maneuvering During Slow Flight
- ☐ Power-Off Stall
- ☐ Power-On Stall
- ☐ Spin Awareness Knowledge (Do not Spin)

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches and Landings
- ☐ Radio Communications
- ☐ Short Field Takeoff and Maximum Performance Climb
- ☐ Short Field Approach and Landing
- ☐ Soft Field Takeoff and Climb
- ☐ Soft Field Approach and Landing
- ☐ Go-Around/Rejected Landing(s)
- ☐ Forward Slip to a Landing

EMERGENCY OPERATIONS

- ☐ Emergency Approach and Landing
- ☐ Systems and Equipment Malfunctions
- ☐ Emergency Equipment and Survival Gear

BASIC INSTRUMENT MANEUVERS (IR – Instrument Reference)

- ☐ Straight-and-Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Speed Descents (IR)
- ☐ Turns to Headings (IR)
- ☐ Recovery from Unusual Attitudes (IR)

NAVIGATION

- ☐ Pilotage and Dead Reckoning
- ☐ Navigation Systems and Radar Services
- ☐ Diversion
- ☐ Lost Procedures

GROUND REFERENCE MANEUVERS

- ☐ Rectangular Course or Turns Around a Point
- ☐ S-Turns

COMPLETION STANDARDS:

- At the completion of the lesson, the student will perform all the maneuvers and procedures listed for review at a proficiency level that meets the criteria set forth in the single-engine land sections of the current FAA Private Pilot Practical Test Standards.

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

FLIGHT LESSON 32

1.5 HOUR TOTAL FLIGHT TIME
OF WHICH:
1.5 HOUR DUAL GIVEN
0.3 HOURS INSTRUMENT INSTRUCTION
0.5 HOURS PRE/POST

LESSON OBJECTIVES:

- Review and application of the maneuvers and procedures covered in this lesson in preparation for the Final Stage Check.

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures

PERFORMANCE MANEUVER

- ☐ Steep Turns

SLOW FLIGHT AND STALLS

- ☐ Maneuvering during slow flight
- ☐ Power-Off Stall
- ☐ Power-On Stall
- ☐ Spin Awareness Knowledge (Do not Spin)

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches and Landings
- ☐ Radio Communications
- ☐ Go-Around/Rejected Landing(s)
- ☐ Short Field Takeoff and Maximum Performance Climb
- ☐ Short Field Approach and Landing
- ☐ Soft Field Takeoff and Climb
- ☐ Soft Field Approach and Landing
- ☐ Go-Around/Rejected Landing(s)
- ☐ Forward Slip to a Landing

EMERGENCY OPERATIONS

- ☐ Emergency Approach and Landing
- ☐ Systems and Equipment Malfunctions
- ☐ Emergency Equipment and Survival Gear

NAVIGATION

- ☐ Pilotage and Dead Reckoning
- ☐ Navigation Systems and Radar Services
- ☐ Diversion
- ☐ Lost Procedures

GROUND REFERENCE MANEUVERS

- ☐ Rectangular Course or Turns Around a Point
- ☐ S-Turns

BASIC INSTRUMENT MANEUVERS **(IR – Instrument Reference)**

- ☐ Straight-and-Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Speed Descents (IR)
- ☐ Turns to Headings (IR)
- ☐ Recovery from Unusual Attitudes (IR)

COMPLETION STANDARDS:

- At the completion of the lesson, the student will perform all the maneuvers and procedures listed for review at a proficiency level that meets the criteria set forth in the single-engine land sections of the current FAA Private Pilot Practical Test Standards.

POST FLIGHT DISCUSSION AND PREVIEW OF NEXT LESSON

PRE & POST GROUND LESSON 33

2.0 HOURS TOTAL GROUND BRIEF

LESSON REFERENCES:

Practical Test Standards
Private Pilot Oral Guide
Federal Aviation Regulations (FARs)
Part 61, Part 91, NTSB 830

Pilot's Handbook of Aeronautical Knowledge
Chapter 11, Weather Theory
Chapter 16, Aeromedical Factors

LESSON OBJECTIVES:

- PTS REVIEW - weather, flight planning, airspace, certificates and documents, aircraft systems, aeromedical factors, minimum equipment lists, and night flying.

ACADEMIC CONTENT:

CROSS COUNTRY PLANNING
- ☐ Sectional - Legend/Symbols/Airspace
- ☐ Navigation
- ☐ Weight and Balance
- ☐ Performance
- ☐ Airport Environment
- ☐ Radio Communications
- ☐ Flight Service

WEATHER
- ☐ Textual Reports METAR, TAF, FA, FD, PIREP, AIRMET, SIGMET
- ☐ Radar Summary
- ☐ NOTAMS D, FDC, TFR

AIRCRAFT
- ☐ Systems
- ☐ Limitations

CERTIFICATES AND DOCUMENTS
- ☐ Pilot
- ☐ Aircraft
- ☐ Aircraft Maintenance Logs Determine Airworthiness

FEDERAL AVIATION REGULATIONS
- ☐ FAR 61
- ☐ FAR 91
- ☐ NTSB 830

AIRSPACE
- ☐ A/B/C/D/E/G
- ☐ Weather And Equipment Requirements For Each Class of Airspace
- ☐ Special Use And Other Airspace

AEROMEDICAL
- ☐ Hypoxia
- ☐ Hyperventilation
- ☐ Middle Ear And Sinus Problems
- ☐ Spatial Disorientation
- ☐ Motion Sickness
- ☐ Carbon Monoxide Poisoning

MINIMUM EQUIPMENT LIST
- ☐ Required Instruments For VFR Day And Night
- ☐ Deferring Maintenance **Without** a MEL
- ☐ When and Why is an MEL Used
- ☐ Special Flight Permit

COMPLETION STANDARDS:

- Indicate a strong knowledge of weather, flight planning, airspace, certificates and documents, aircraft systems, aeromedical factors, minimum equipment lists and night flying with limited instructor assistance.

STUDY ASSIGNMENT:

Review of Ground Lesson 17, 20, 25, 33

Take Private Pilot Final Essay Exam

FLIGHT LESSON 34

FINAL REVIEW FLIGHT PRIOR TO STAGE

1.7 HOUR TOTAL FLIGHT TIME
OF WHICH:
1.7 HOUR DUAL GIVEN
0.3 HOURS INSTRUMENT INSTRUCTION
0.3 HOURS PRE/POST

LESSON OBJECTIVES:

- Verify that student is ready to be their own pilot, this will done by conducting the flight with student acting as PIC throughout the flight.
- Expand students decision making ability through different flight scenarios
- Insure realistic in flight emergencies are covered and the decisions by the student are consistent with training.

Note: *Instructor is always PIC but allow the student to develop Aeronautical Decision Making skills and see how they will perform when they are on their own. At anytime the student is not able to act safely it is the instructor's responsibility to take over the flight and teach the areas that are deficient.*

REVIEW:

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures
- ☐ Determine Airworthiness from Aircraft Maintenance Logs

PERFORMANCE MANEUVER

- ☐ Steep Turns

SLOW FLIGHT AND STALLS

- ☐ Maneuvering During Slow Flight
- ☐ Power-Off Stall
- ☐ Power-On Stall
- ☐ Spin Awareness Knowledge (Do not Spin)

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches and Landings
- ☐ Radio Communications & Light Signals
- ☐ Go-Around/Rejected Landing(s)
- ☐ Short Field Takeoff & Max Performance Climb
- ☐ Short Field Approach and Landing
- ☐ Soft Field Takeoff and Climb
- ☐ Soft Field Approach and Landing
- ☐ Forward Slip to a Landing

EMERGENCY OPERATIONS

- ☐ Emergency Approach and Landing Off Airport
- ☐ Systems and Equipment Malfunctions
- ☐ Emergency Equipment and Survival Gear
- ☐ Emergency Descent

NAVIGATION

- ☐ Pilotage and Dead Reckoning
- ☐ Navigation Systems VOR & GPS, Radar Services
- ☐ Diversion
- ☐ Lost Procedures

GROUND REFERENCE MANEUVERS (choose at least1)

- ☐ Rectangular Course, S-Turn, Turns Around a Point

BASIC INSTRUMENT MANEUVERS (IR – Instrument Reference)

- ☐ Straight and Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Airspeed Speed Descents (IR)
- ☐ Turns to Headings (IR)
- ☐ Recovery from Unusual Flight Attitudes (IR)
- ☐ Radio Communications, Navigation Systems/Facilities, and Radar Services (IR)

EXAM

- ☐ Private Pilot Final Essay Exam Given.

(≥70% required to pass examination)

COMPLETION STANDARDS:

- At the completion of the lesson, the student will perform all the maneuvers and procedures listed for review at a proficiency level that meets the criteria set forth in the single-engine land sections of the current FAA Private Pilot Practical Test Standards.

STAGE CHECK - FLIGHT 35

STAGE CHECK 2/End of Course

1.7 HOUR TOTAL FLIGHT TIME
OF WHICH:
1.7 HOUR DUAL GIVEN
0.2 HOURS INSTRUMENT INSTRUCTION
3.0 HOURS PRE/POST

LESSON OBJECTIVES:

- The Chief Flight Instructor, Assistant Chief Flight Instructor, or a Check Instructor will evaluate the student's proficiency in the proper execution of the maneuvers and procedures listed below.

PREFLIGHT

- ☐ Preflight Orientation and Preparation
- ☐ Preflight Procedures
- ☐ Safety-Related Operations and Procedures
- ☐ Determine Airworthiness from Aircraft Maintenance Logs

NAVIGATION

- ☐ Pilotage and Dead Reckoning
- ☐ Navigation Systems VOR & GPS, Radar Services
- ☐ Diversion
- ☐ Lost Procedures

PERFORMANCE MANEUVER

- ☐ Steep Turns

SLOW FLIGHT AND STALLS

- ☐ Maneuvering During Slow Flight
- ☐ Power-Off Stall
- ☐ Power-On Stall
- ☐ Spin Awareness Knowledge (Do not Spin)

EMERGENCY OPERATIONS

- ☐ Emergency Approach and Landing Off Airport
- ☐ Systems and Equipment Malfunctions
- ☐ Emergency Equipment and Survival Gear
- ☐ Emergency Descent

GROUND REFERENCE MANEUVERS (choose at least 1)

- ☐ Rectangular Course, S-Turn, Turns Around a Point

TAKEOFFS, LANDINGS AND GO-AROUNDS

- ☐ Soft Field Takeoff and Climb
- ☐ Soft Field Approach and Landing
- ☐ Forward Slip to a Landing
- ☐ Normal and/or Crosswind Takeoffs and Climbs
- ☐ Traffic Pattern
- ☐ Normal and/or Crosswind Approaches and Landings
- ☐ Radio Communications & Light Signals
- ☐ Go-Around/Rejected Landing(s)
- ☐ Short Field Takeoff & Max Performance Climb
- ☐ Short Field Approach and Landing

BASIC INSTRUMENT MANEUVERS (IR – Instrument Reference)

- ☐ Straight-and-Level Flight (IR)
- ☐ Constant Airspeed Climbs (IR)
- ☐ Constant Airspeed Speed Descents (IR)
- ☐ Turns to Headings (IR)
- ☐ Recovery from Unusual Flight Attitudes (IR)
- ☐ Radio Communications, Navigation Systems/Facilities, and Radar Services (IR)

COMPLETION STANDARDS:

- At the completion of the lesson, the student will perform all the maneuvers and procedures listed for review at a proficiency level that meets the criteria set forth in the single-engine land sections of the current FAA Private Pilot Practical Test Standards.

POST FLIGHT DISCUSSION

FLIGHT LESSONS COMPLETION RECORD – Paper records only

☐ RECORD OF FLIGHT TIME:

	TOTAL TIME	SOLO	DUAL	Flight Trainer	FLIGHT CONDITIONS				LANDINGS	
					X-C	DAY	NIGHT	INST.	DAY	NIGHT
Forwarded TOTAL TIME										
Adjustments	**	XXXXX	**	**	XXXXX	XXXX	XXXXX		XXXXX	XXXXX
New Total Times										
TOTAL TIME REQUIREMENTS	**44.9**	**10.0**	**34.9**	**	**6.5**		**3.0**	**3.3**		**10**

☐ SPECIFIC COURSE REQUIREMENTS:

- Dual Night Cross-Country Flight and Night Training Requirements:
  *(14 CFR Part 141 Appendix B, Section 4(b)(1)(ii)) *Lesson # 21 & #23 could be done at night.*

FLIGHT LESSON	DATE	ROUTE OF FLIGHT		FLIGHT CONDITIONS			LANDINGS		Instructor's Signature
		TO	FROM	Night X-C	DAY	NIGHT	DAY	NIGHT	
***21**									
***23**									
26									
			TOTAL TIME						
			TOTAL TIME REQUIREMENTS	**3.0**	**-**	**3.0**	**-**	**10**	

- Dual Cross Country Flights

FLIGHT LESSON	DATE	ROUTE OF FLIGHT	REQUIREMENTS	Distance	Instructor's Signature
21			Cross-country flight of at least 50 NM from point of departure with takeoffs and landings to a full stop at an airport.		
23			Cross-country flight of at least 50 NM from point of departure and a minimum of 2 takeoffs and landings to a full stop at an airport with an operating control tower (with each landing involving a flight in the traffic pattern) at an airport.		

- Student Solo under the supervision of an authorized instructor: (**150 NM Total Solo X Country)

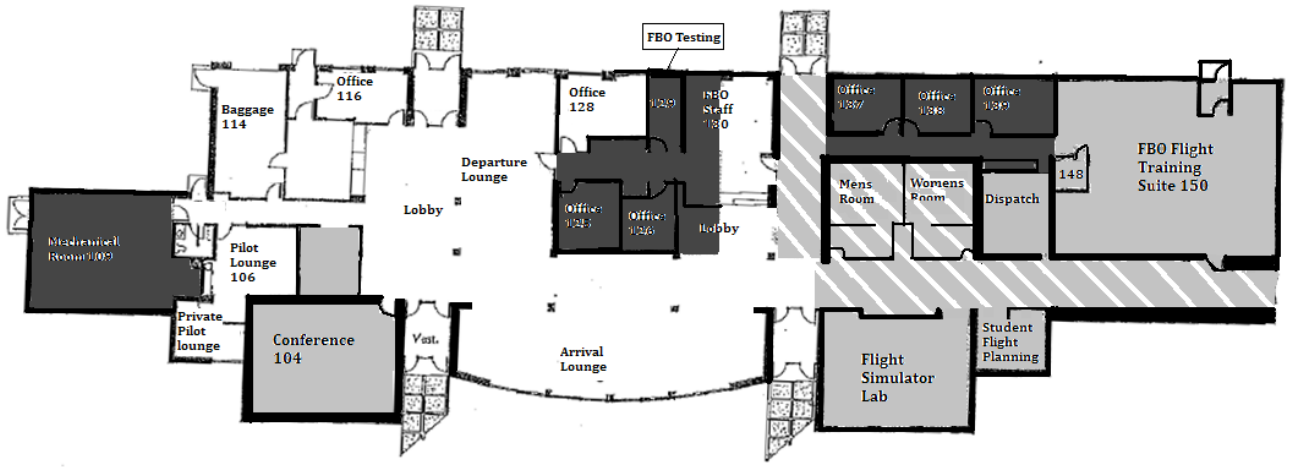
FLIGHT LESSON	DATE	ROUTE OF FLIGHT		SOLO	FLIGHT CONDITIONS		LNDGS@ CTR TWR	Instructor's Signature
		From	To		X-C	LOCAL		
13								
22								
24								
27								
****29**								
30								
			TOTAL TIME					
			TOTAL TIME REQUIREMENTS	**10.0**	**6.5**		**3**	

FAA Practical Test

Date	Examiner	Result (1st Attempt)

APPENDIX A

DIAGRAM - 1



Legend

- City of Mankato and public Area
- North Star Aviation Area
- Shared Area
- Flight Training Area

0 25 50

Area configurations:

The Corridors, washrooms, and the mechanical room divided up equally between the City of Mankato and North Star Aviation. Each space was calculated by three area configuration options.

-area calculated from outside of exterior wall to outside of exterior wall.

-area calculated from outside of exterior wall to center line of interior wall.

-area calculated from center line of interior wall to center line of interior wall.

City of Mankato and public space including shared Areas with North Star Aviation =	8,703 Sq Ft
North Star Aviation areas including Areas shared with City of Mankato and the public =	6,597 Sq Ft
Total building area =	15,300 Sq Ft

DIAGRAM -2

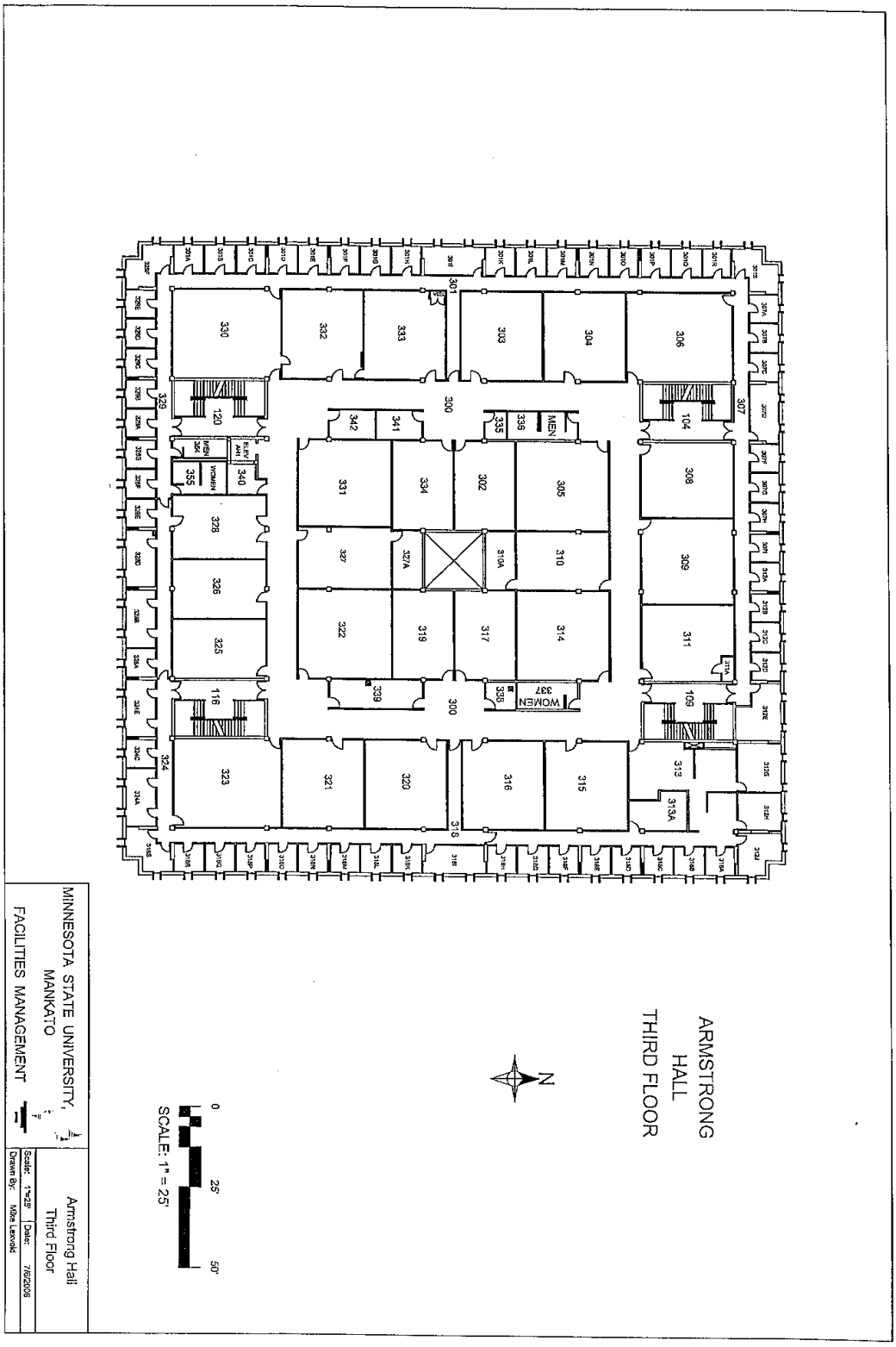


Diagram 2
ARMSTRONG
HALL
THIRD FLOOR
N
SCALE: 1" = 25'
0
25'
50'
MINNESOTA STATE UNIVERSITY, MANKATO
FACILITIES MANAGEMENT
Armstrong Hall
Third Floor
Scale: 1"=25'
Date: 7/6/2006
Drawn By: Mike Lexvold
MEN
WOMEN
330
332
333
303
304
306
307
104
308
309
311
313
313A
315
316
320
321
323
324
325
326
328
329
120
340
355
341
342
335
336
331
334
302
305
327
327A
310A
310
322
319
317
314
339
337
338
116
109
300
301

DIAGRAM - 3

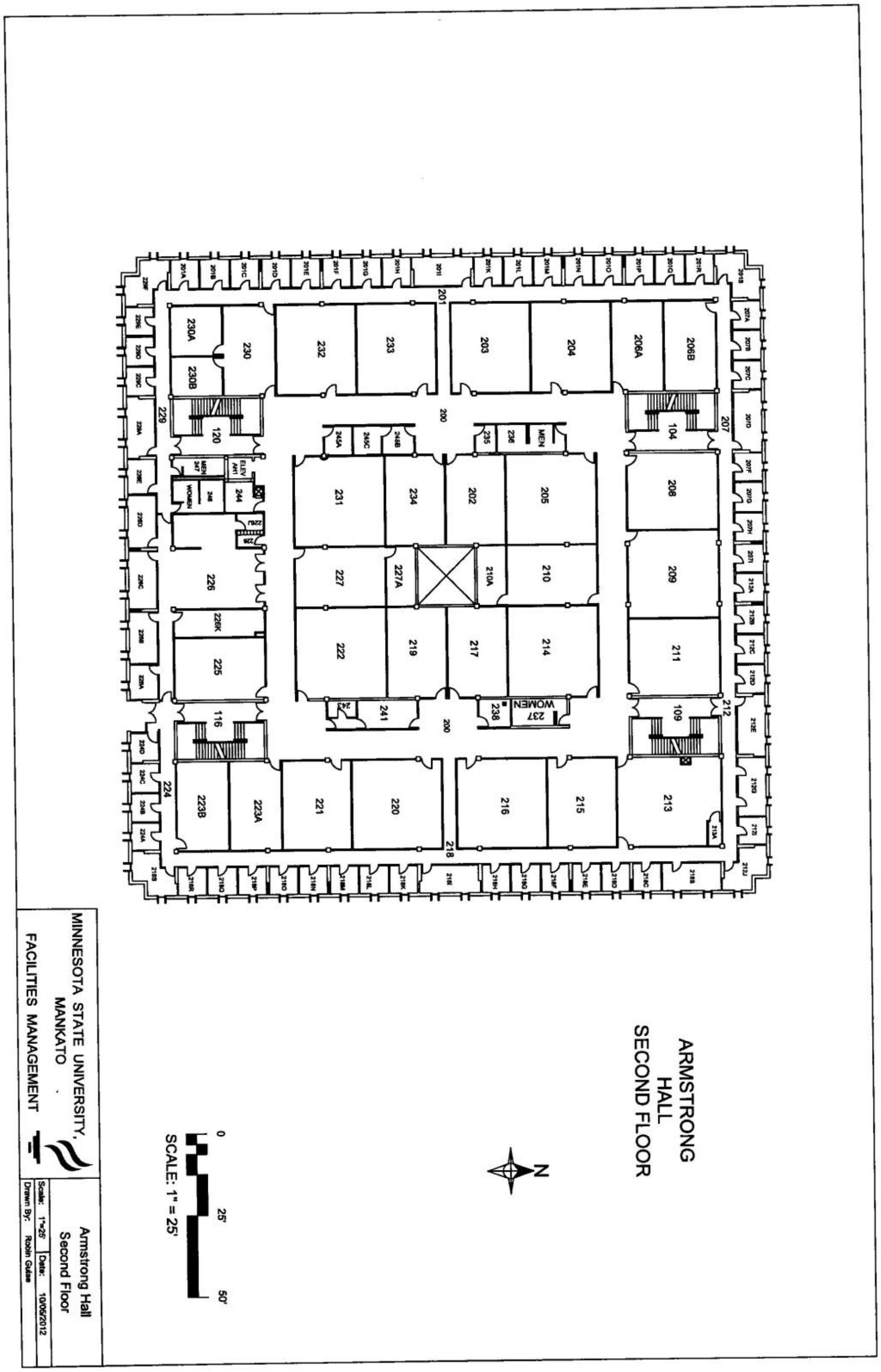

ARMSTRONG HALL SECOND FLOOR
SCALE: 1" = 25'
MINNESOTA STATE UNIVERSITY, MANKATO
FACILITIES MANAGEMENT
Armstrong Hall Second Floor

Diagram - 4

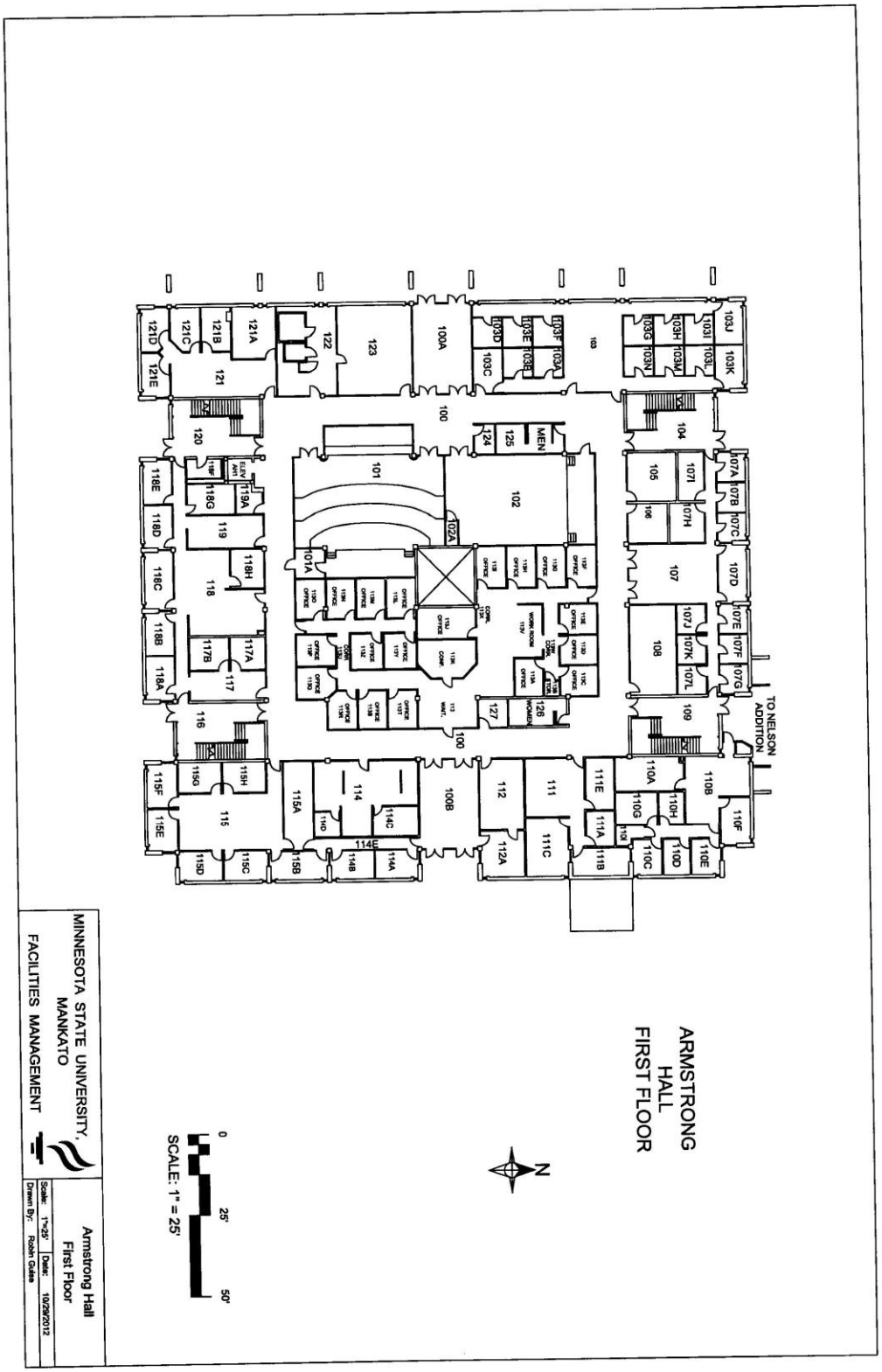

ARMSTRONG
HALL
FIRST FLOOR
TO NELSON ADDITION
MEN
WOMEN
N
SCALE: 1" = 25'
0
25'
50'
MINNESOTA STATE UNIVERSITY, MANKATO
FACILITIES MANAGEMENT
Armstrong Hall
First Floor
Scale: 1"=25'
Date: 10/29/2012
Drawn By: Robin Gates

DIAGRAM 5 RED BIRD LOA

U.S. Department
of Transportation
Federal Aviation Administration

800 Independence Ave., SW
Washington DC 20591

DEC 19 2014

Mr. Jerome N. Gregoire
Redbird Flight Simulations
2301 East St. Elmo Rd., Suite 100
Austin, Texas 78744

Dear Mr. Gregoire:

The Federal Aviation Administration (FAA) last qualified and approved your airplane LD, SD, FMX, and MCX device as an Advanced Aviation Training Device (AATD) on February 14, 2013 in accordance with Title 14 Code of Federal Regulations (14 CFR) section (§) 61.4(c). This training device was found to meet the criteria for an AATD as described in FAA Advisory Circular AC 61-136.

Starting January 1, 2015, the FAA requires all Letters of Authorization (LOA) to contain the correct training allowances to remain valid. Based on the previous approval and review of the qualification and approval guide dated February 7, 2013, the FAA has determined that this device continues to meet the current standards for approval. The Redbird model LD, SD, FMX, and MCX is authorized for use in satisfying the following sections of Title 14 of the Code of Federal Regulations parts 61 and 141:

Redbird Model LD, SD, FMX, MCX version 4.4
Airplane Single and Multi-Engine Land
Advanced Aviation Training Device (AATD)

- § 61.51(b)(3) – Logbook entries;
- § 61.51 (h) – Logging training time;
- § 61.57(c) – Instrument experience;
- § 61.57(c)(4)(iii) – Instrument experience;
- § 61.57(c)(5)(ii) – Instrument experience;
- § 61.57(d)(1)(ii) – Instrument proficiency check, per the Instrument PTS;
- § 61.65(i) – Instrument rating;
- § 61.109(k)(1) – Private Pilot Certificate Aeronautical experience: up to 2.5 hours;
- § 61.129(i)(1)(i) – Commercial Pilot Certificate: up to 50 hours;
- § 61.159(a)(3)(i) – Airline Transport Pilot Certificate: up to 25 hours; and
- § 141.41(b) – Approved for use under the part 141 appendices as follows:
  - *Appendix B* – Up to 15% toward the total Private Pilot flight training time requirements;

- *Appendix C* – As allowed under 4(b) toward the total instrument flight training time requirements;
- *Appendix D* – Up to 20% toward the total Commercial Pilot flight training time requirements;
- *Appendix E* – Up to 25% toward the total Airline Transport Pilot flight training time requirements;
- *Appendix F* – Up to 5% toward the total Flight Instructor flight training time requirements;
- *Appendix G* – Up to 5% toward the total Flight Instructor instrument flight training time requirements;
- *Appendix I, Private Pilot Airplane Single Engine or Multiengine Class Rating Course* – Up to 3 hours toward the flight training time requirements;
- *Appendix I, Commercial Pilot Airplane Single Engine or Multiengine Class Rating Course* – Up to 11 hours toward the required flight training time *requirements;*
- *Appendix I, Airline Transport Pilot Airplane Multiengine Class Rating Course* – Up to 6.25 hours toward the flight training time; and
- *Appendix M, Combined Private Pilot Certification and Instrument Rating* – Up to 25% toward the total flight training time requirements

Note: Training or experience requirements such as cross country, night, solo, takeoffs and landings, or the 3 hours of training within 2 calendar months of the practical test must be accomplished in an aircraft. Private Pilot Airplane applicants must also complete the requirement for 3 hours of control and maneuvering of an airplane solely by reference to instruments specified in §61.109 in an airplane. Additionally, practical tests cannot be conducted in an AATD.

Exemption Notice: This device qualifies for the exemption from 14 CFR section 61.65(i) and part 141 Appendix C under the terms and conditions described in the FAA Notice of Policy Change for the Use of FAA Approved Training Devices in the Federal Register (Docket No.: FAA-2013-0809). This exemption allows pilots applying for an instrument rating to credit up 20 hours of time obtained in this device toward the aeronautical experience requirements in § 61.65(d)(2). In addition, this exemption allows training providers with a training course outline approved under part 141 Appendix C, to continue to train under that program with up to a 40% credit of the training time requirement obtained in this device. This exemption will expire as noted in the Federal Register policy notice.

This approval is contingent upon the following:

1) This aviation training device must continue to maintain its performance and function without degradation. The minimum instrument requirements specified under 14 CFR part 91, § 91.205 for day visual flights rules (VFR) and instrument flight rules (IFR) must be functional during the training session;

2) Only the configurations that are in the FAA approved Qualification and Approval Guide are utilized during training;

3) A copy of this authorization and approval letter must be readily available in a location near the device when in use. Additionally, a copy of this authorization must be provided to the person using the above credits for pilot certification or ratings;

4) An authorized instructor must provide and certify the above instructional use;

5) Any changes or modifications to this aviation training device which have not been reviewed, evaluated, and approved by AFS-800 will terminate this letter of approval; and

6) The FAA reserves the right to revoke this authorization at any time if the Administrator determines that this training device is used contrary to FAA regulation, guidance, or safety.

This approval is valid for sixty (60) calendar months from the date of this letter and supersedes any previous approvals for this training device. Renewal requests should be made prior to the expiration (90 days in advance) by letter to AFS-800 and the above contingencies (1) through (6) must remain valid. At the time of application AFS-800 will conduct (at a minimum) a review of the QAG, to verify compliance with the current AC 61-136 for their approval and use, before a new Letter of Authorization (LOA) can be provided.

This authorization expires on 11/30/2019

Sincerely,

James A. Viola
Manager, General Aviation and Commercial Division
Flight Standards Service

DIAGRAM -6 Enrollment Certificate

This is to certify that

(Name)

is enrolled in the Federal Aviation Administration approved ***Private Pilot Single-Engine Airplane Land*** Course conducted by North Star Aviation Inc.

_____ X _____

Date of Enrollment Chief Flight Instructor

Revision: Original

DIAGRAM – 7 Graduation Certificate

DEPARTMENT OF AVIATION
MINNESOTA STATE UNIVERSITY MANKATO

North Star AVIATION

Private Pilot Single Engine Airplane Course
Graduation Certificate

Name Here

I certify that the above named candidate has successfully completed all the Federal Aviation Administration stage checks, tests, course requirements and has completed the cross country training specified in FAR 141 Appendix B. I certify that North Star Aviation Inc. has trained the individual in accordance with our approved Flight Training School Syllabus for the Private Pilot Single Engine Airplane course and I certify this information to be true and correct.

Chief Flight Instructor

NUTS521L
Flight School Certificate

1/2/2015
Date of Graduation

DIAGRAM - 8

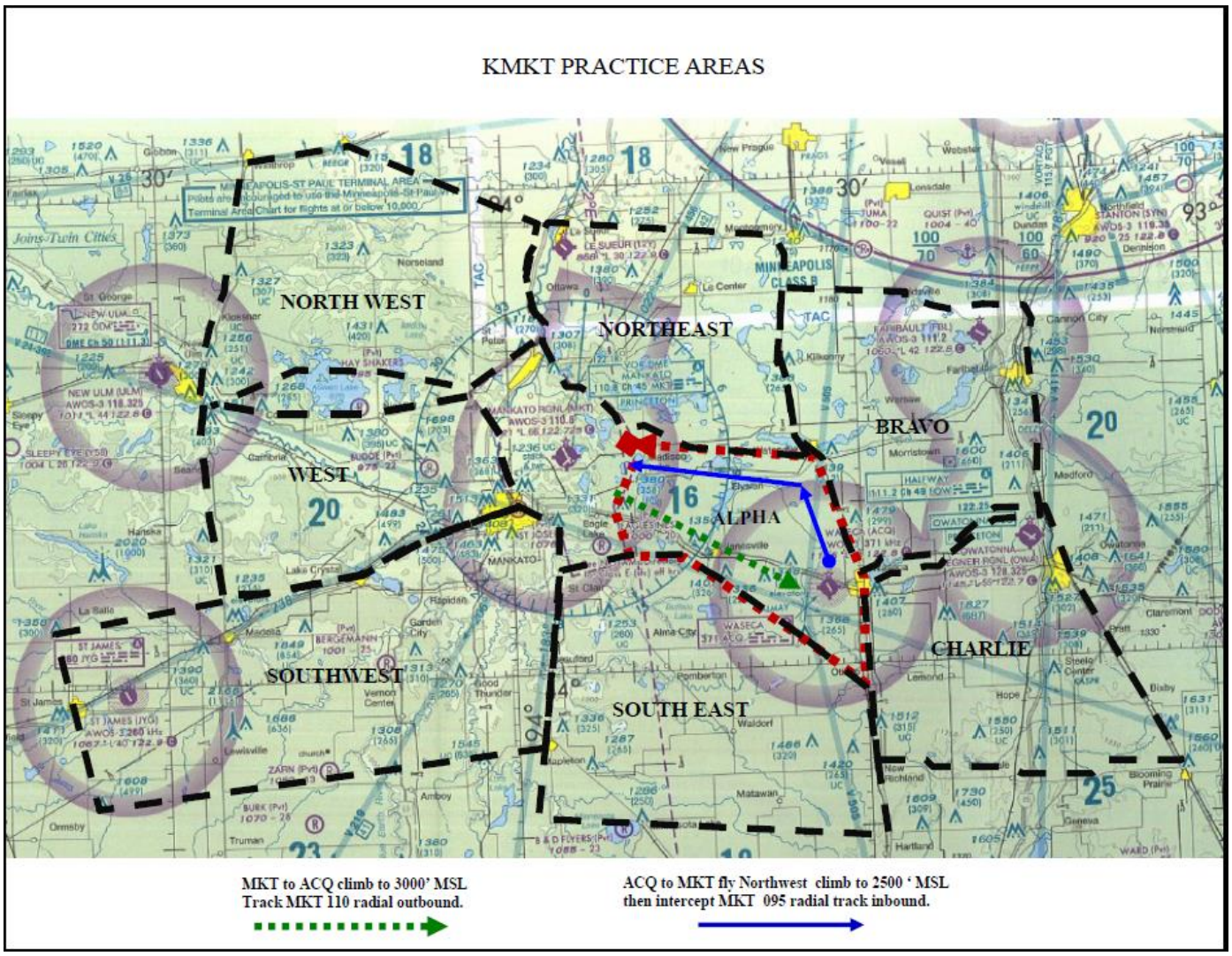

KMKT PRACTICE AREAS
NORTH WEST
NORTHEAST
WEST
ALPHA
BRAVO
CHARLIE
SOUTHWEST
SOUTH EAST
MKT to ACQ climb to 3000' MSL
Track MKT 110 radial outbound.
ACQ to MKT fly Northwest climb to 2500 ' MSL
then intercept MKT 095 radial track inbound.

DIAGRAM – 10 Sample Dispatch Release

Dispatch Ticket

generated by Jeppesen SkyManager for
North Star Aviation

Date/Time	12/13/2013 10:00 AM	Aircraft	PA28 N281MK
Student	smsupport	Instructor	Robbie Johnson
Hobbs Out	104.0	Fuel	
Hobbs In		Oil	
Tach Out	123.0	Landings	
Tach In			

Comments

Squawks

Student Signature and Date

Instructor Signature, Number, Date

Annual		Pitot/Static	
ELT		Transponder	
50 Hour		100 Hour	

METAR	(unofficial) KMKT 131555Z AUTO 08012KT 10SM CLR M09/M12 A3013 RMK AO1
TAF	(unofficial) KMSP 131422Z 1314/1418 05011KT P6SM BKN025 OVC040 FM140400 04007KT 3SM -SN SCT015 OVC025 FM141400 36005KT 5SM -SN SCT012 OVC020

	No Instr App	No Ldg	Airplane SEL	Airplane MEL	Cross Country	Day	Night
Previous	1234.0	9.0					23.0

	Actual Instrument	Simulated Instrument	Simulator	Dual Received	Dual Given	Pilot In Command	Total Duration
Current							
Total							
Previous	3.0	2.0	1.0		234.0		9.0
Current							
Total							

INTENTIONALLY LEFT BLANK

INTENTIONALLY LEFT BLANK

DIAGRAM 13 GROUND SCHOOL TRAINING RECORD – Paper Records Only

FAR 141-1A

Ground School Training Record

Private Pilot Ground School

STUDENT NAME: _____

Date	Hours	Lesson	
	1.5	Lesson 1 -	Flight training process and careers in aviation
	1.5	Lesson 2 -	Airplane Components and Principals of Aerodynamics
	1.5	Lesson 3 -	Powerplant related Aircraft systems and flight instruments
	1.5	Lesson 4 -	Basic flight instruments - standard panel and glass panel
	1.5	Lesson 5 -	Aeronautical charts and airspace
	1.5	Lesson 6 -	Review airspace
	1.5	Lesson 7 -	FAR's for Private Pilot - limitations, priviledges, and NTSB accident reporting
	1.5	Lesson 8 -	Airports & preflight action on obtaining runway lengths, data on takeoff and landing distances
	1.5	Lesson 9 -	Weather theory and weather patterns
	1.5	Lesson 10 -	Printed weather reports, forecasts and graphic weather
	1.5	Lesson 11	Preflight Obtaining weather reports/Forecasts, Recognition Crit Weather grnd & Flt ,Windshear Avoid, Procure Weather Reports & Forecasts
	1.5	Lesson 12	Aircraft performance Effects of Densisty Altitude on takeoff & climb, weight and balance
	1.5	Lesson 13	Exam I
	1.5	Lesson 14	Review exam I
	1.5	Lesson 15	Human factors - Aeronautical Decision making & judgment
	1.5	Lesson 16	Flight physiology
	1.5	Lesson 17	Safe & Efficient ops of aircraft, Safety of flight - Recognition of Wake Turbulence, Collision Avoid , weather hazards, Stall /Spins
	1.5	Lesson 18	Basic navigation skills, Aeronautical Charts for VFR navigation using pilotage, dead reconing & navigation systems
	1.5	Lesson 19	Cross country flight planning
	1.5	Lesson 20	Review cross country flight planning, Preflight Action - Unable to complete flight or Delays
	1.5	Lesson 21	Radar, air traffic control services and radio procedures
	1.5	Lesson 22	Radio Communication Procedures
	1.5	Lesson 23	Exam II
	1.5	Lesson 24	Review exam II
	1.5	Lesson 25	Advanced Aerodynamic Prinicpals
	1.5	Lesson 26	Review advanced aerodynamics Prinicpals
	1.5	Lesson 27	Advanced Aeronautical Decision Making and Judgement
	1.5	Lesson 28	Advanced navigation techniques & Aeronautical charts for VFR navigation using navigation systems
	1.5	Lesson 29	review session for final exam
	1.5	Lesson 30	Final exam
TOTAL	45		

	Score %	Failed Scores %	Instructor Signature
Exam I			
Exam II			
Final Exam			

Revision 3: December 01, 2013