APEX
FLIGHT ACADEMY

Flight Grading Program
Training Syllabus

Flight Grading Program
Training Syllabus

Distribution Number: _____

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Both Electric and Paper Version needs to check validity before Use.

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List of Distribution

Both Electronic and Paper Version need to be check validity before use. Flight Operations Department is in charge of editing, and will notify all manual holders about any changes that may occur

Number	Holder	Number	Holder
3301	**CAA**		
3302	**APEX Taitung Office**		
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Record of Revisions

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Record of Temporary Revisions

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SYLLABUS OVERVIEW

1. **Apex Flight Academy** flight training campus is located at Taitung. The CAA operator certificate is **CAA141-2014-001**

   Main Office Address:

   No. 1100, Minhang Rd., Taitung City, Taitung County, 95063, Taiwan

2. This Training syllabus complies with the regulations outlined in **CAR 05-02A**.

3. The **Flight Grading Program** is designed to determine if students with little or no prior flight experience have the potential to become successful airline pilots. Specifically, the course is divided in 2 phases: Ground School and Flight Grading activities. During this course, Apex Flight Academy wants to test and determine, among others, the psychomotor abilities of a person (eyes-hands-feet coordination), the flight environment adaptability, learning speed, and information retention skills. At the end of the program, Apex Flight Academy provides the students with a grade and a thorough description of their suitability for the airline environment based on their performance during the program.

4. The student needs to comply with the following requirements to enroll in this course:

   a. High school diploma
   b. Minimum 18 years of age at the beginning of the course
   c. Sound knowledge of physics and mathematics
   d. No more than 10 hours flight time in an aircraft as dual received lesson with flight instructor.

5. This training syllabus is intended to be completed successfully by achieving in order of importance the following goals:

   - The first and most important goal is to ensure this training program is conducted safely according to the Flight Operations Manual and other Standard Operating Procedures outlined in Apex Flight Academy's manuals. **SAFETY IS OUR NUMBER ONE PRIORITY.**

- Second, on each and every lesson, deliver to the students the most updated aviation knowledge, through flight instruction or ground instruction, and provide them with the approved publications distributed by the most reliable resource in the aviation industry.
- Our third goal is to ensure flight training is properly deliver through effective communication between instructors and students, and the highest quality of instruction are guaranteed by the highest standards of safety and instructors' preparation.
- The fourth goal is to develop the student's **Basic Flying Skills**, utilizing the Drill and Practice Method. The goal is to develop the smoothness on the flight control, the coordination, and the ability to multi-task in the airplane's cockpit
- Finally we want to ensure that the students, upon completion of this course, are fully aware and understand what their abilities are so they can make a more educated determination whether they are suitable to be airline pilots or not.

6. **Course Phases and Training order:**
   The flight grading training program integrates ground school and flight training. After the ground phase is completed, students report to the training facility in Taitung to continue their flight training until completion of the course.
   The course process is
   Phase 1 Flight Grading Ground School
   Phase 2 Flight Grading Flight Training and Final Evaluation

7. In summary, this program is not meant to meet the CAA practical test standards of completion for the issuance of a license, but rather to determine if the student will be a successful pilot based on the abilities demonstrated during the flight grading program. This program is also meant to develop Apex Flight Academy's selection process of those students who meet the flight school's standards in order to ensure quality of training, quality of pilots, and deliver these quality products to the aviation industry in Taiwan and the rest of the world.

8. **Taitung Training Facility:**

Apex Flight Academy Taitung base includes a lounge for students and 5 briefing rooms for students/instructors. All briefing rooms are equipped with computers and 2 have G1000 Avionics CBT.
The classroom area is 48.4m^2 with tables and chairs for 9 students. It is equipped with white boards and projectors.

9. **Flight Grading System:**

The grades are given to the students according to the level of performance outlined in the lesson. Three are the level of performance for each task:

- **Introduction:** pilot under instruction can describe physical characteristics/cognitive elements of the maneuver
- **Practice:** pilot under instruction can plan and execute the maneuver with coaching and assistance to correct deviations and error.
- **Perform:** pilot can plan and execute the maneuver to the completion standard outlined in the lesson without assistance or coaching from instructor pilot.

The grading system utilizes a **1 to 5** numerical scale with the following definition:

5: Above standard- is grade which will be given to a candidate for flying task execution without any remark.

4: Upper standard limit - is grade which will be given to a candidate who will be capable of executing flying tasks easily and without any difficulty, help or advice from instructor. During the flight student flies the aircraft, operates cabin tasks, makes right decisions and manages the airplane as licensed pilot.

3: Standard - Candidate is capable of accomplishing the entire flight exercise but with some assistance or advice from the instructor (examiner). It is certain that this candidate will achieve upper standard limit with time, but only with further practice and experience.

2: Lower standard limit- Candidate doesn't acquire knowledge and skills in requested time during the course.
Student is incapable of accomplishing flying tasks without assistance and has obligation to take additional flying hours.
It is certain that this candidate will achieve standard after additional flying hours.

1: Below standard – is grade which will be given to a candidate who encounter a lot of difficulties during the training due to a lack of precognition, psycho-physical abilities for flying, motivation, short-term memory, and multi-tasking abilities. In addition, this grade will be given to a candidate for who is not certain that additional flying hours will give positive effect on training success. Chief Flight Instructor have to be informed about this candidate and to decide how further candidate's training should continue.

10. **Chief Flight instructor:**
    The Chief flight instructor designated for this course meets the qualifications as listed in CAR 05-02A and are approved by CAA.

11. **Assistant Chief Flight Instructor:**
    The Assistant Chief flight instructor designated for this course meets the qualifications as listed in CAR 05-02A and are approved by CAA.

12. **Check Flight Instructor:**
    The Check Airman designated for this course meets the qualifications as listed in CAR 05-02A and are approved by Apex Flight Academy and CAA.

13. **Flight Instructor and Qualification:**
    Flight instructors designated for this course meets the qualifications as listed in CAR 05-02A, and are all approved by Apex Flight Academy and CAA.

14. **Training Material:**
    Includes FAA books and materials, Jeppesen books and materials, ICAO books and materials, Apex Training Manuals, online CBT and Apex approved Power-Points Presentations.

15. **Training Aircraft:**

Diamond DA40 NG for Single engine VFR/IFR training Day/Night
Both aircraft are equipped with Dual VHF transmitter and receiver, and have VOR, DME, NDB, GPS navigation systems which meets the requirements to conduct VFR and IFR operations under CAR 07-02A

16. **Flight Training Device:**
Mechtronix Flight Training Device convertible to Diamond DA40 NG / DA42 NG to conduct lessons listed as FTD

Note

Lessons in the FTD May be Conducted in the Actual Aircraft at the discretion of Chief Flight Instructor

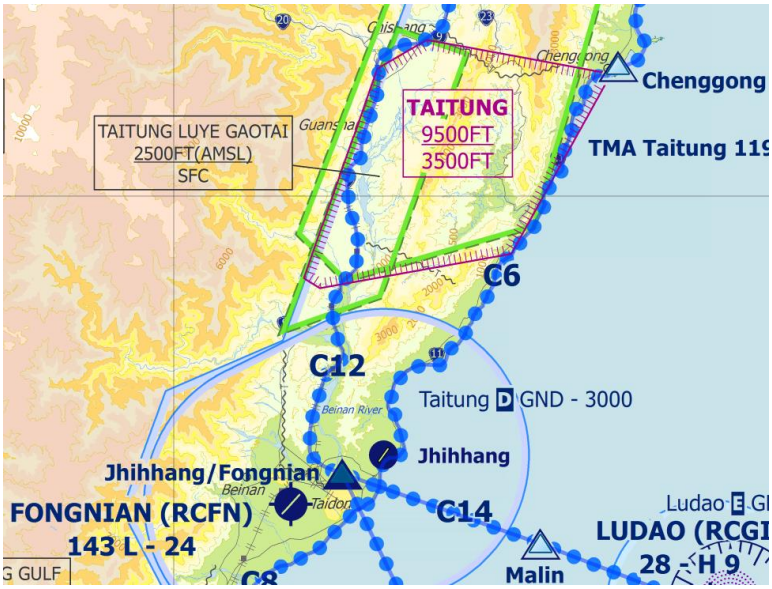
17. **Training Airports:**
All the civil airports in Taiwan and approved by CAA:

RCFN Taitung/Fongnian
RCKH Kaohsiung International
RCKW Hengchun (Need special permission from Chief Instructor and only for Instructor pilot training*)
RCYU Hualien
RCSS Taipei/Songshan
RCTP Taipei/Taiwan Taoyuan International (Need Special Permission from CAA)
RCNN Tainan
RCQC Magong
RCWA Wang-an
RCCM Qimei
RCGI Ludao
RCBS Kinmen

18. Training Areas:

TAITUNG RIFT VALLEY TRAINING AREA 9500FT/3500FT MSL

CONTINUOUS



GREEN ISLAND TRAINING AREA 10000FT/3000FT MSL

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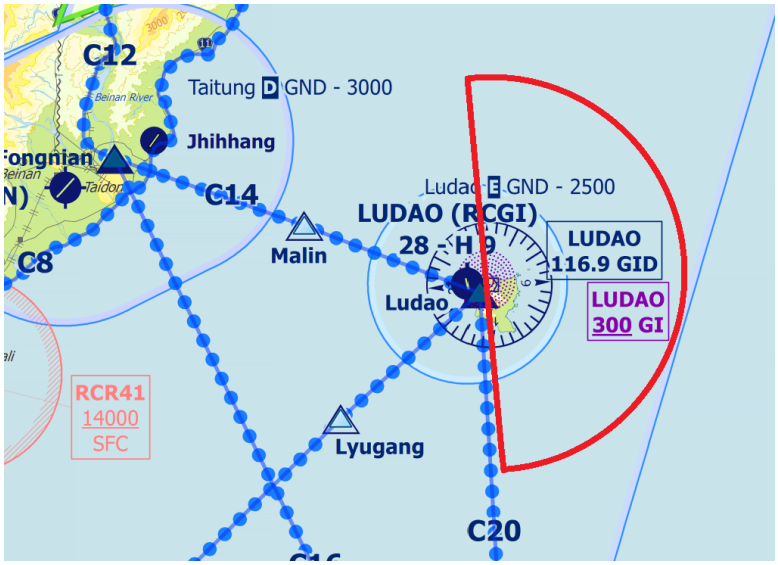
(0-180 RADIAL, 10NM FROM GID VOR RADIUS)



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List of Abbreviations

A	
A/C	Aircraft
ATC	Air Traffic Control
ADC	Air Data Computer
AD	Airworthiness Directive
ADF	Automatic Direction Finder
APP.	Approach
AFM	Airplane Flight Manual
AP	Auto Pilot
C	
CBT	Computer Based Training
CPL	Commercial Pilot License
CAA	Civil Aeronautics Administration
CDI	Course Deviation Indicator
CG	Center of Gravity
CRM	Crew Resource Management
D	
DA40NG	Diamond DA40
DA42NG	Diamond DA42
DE	Designated Examiner
DA	Decision Altitude
DH	Decision Height
DP	Decision Point
DME	Distance Measuring Equipment
DG	Dangerous Goods
DL	Dual Local
Dual	Flight Training with Instructor onboard
DXC	Dual Cross-Country
DS	Dual and Solo
DSL	Dual and Solo Local
DTPO	Dual Traffic Pattern Operations
E	
eAIP	Electronic Aeronautical Information
EOP	End of Phase Check

EFD	Electric Flight Display
F	
FAA	Federal Aviation Administration of the United States
FADEC	Full Authority Digital Engine Control
FTD	Flight Training Device
FOM	Flight Operation Manual
F/T	Flight Time
G	
G/D	Ground Time
G1000	Garmin G1000 (Avionic system for DA40/42)
GB	Ground Briefing
GPS	Global Positioning System
GS	Glide-slope
GS	Ground Speed
H	
HDG	Heading
HSI	Horizontal Situation Indicator
I	
IP	Instructor Pilot
IR	Instrument Rating
IFR	Instrument Flight Rule
IMC	Instrument Meteorological Condition
ILS	Instrument Landing System
Inst.	Instrument Time (on syllabus time recording sheet)
ICAO	International Civil Aviation Organization
K	
KIAS	Knots Indicated Airspeed
KTS	Knots
L	
Lndg.	Landing
LDA	Localizer Type Directional Aid
LOC	Localizer
LTPO	Local Traffic Pattern Operations
M	
MDA	Minimum Descent Altitude
MDH	Minimum Descent Height

MEL	Minimum Equipment List
METAR	Aviation Routine Weather Report
N	
N/A	Not Available
NDB	Non directional beacon
NM	Nautical Miles
Nr	Number
NOTAM	Notice to Airman
NXCL	Night Cross-Country and Local
O	
OBS	Omni Bearing Selector
OAT	Outside Air Temperature
P	
PIC	Pilot in Command
PF	Pilot Flying
PM	Pilot Monitoring
PPL	Private Pilot License
Pre/Po	Preflight and post flight briefing
POH	Pilot Operating Handbook
PTS	Practical Test Standards
PIREPS	Pilot Reports
Q	
QNH	Atmospheric Pressure at Nautical Height
R	
RMI	Radio Magnetic Indicator
S	
SP	Student Pilot
SLTP	Solo Local and Traffic Pattern
SPIC	Student pilot in command time
SPECI	Aviation Selected Special Weather Report
SID	Standard Instrument Departure (Route)
STAR	Standard Arrival Route
SMS	Safety Management System
STF	Stage Check Flight
STO	Stage Check Oral
SXC	Solo Cross-Country

T

TAF	Terminal Area (Aerodrome) Forecast
TAS	Traffic Avoiding System
TM	Training Manual
TP	Traffic Pattern
TTD	Total Time to Date
TPO	Traffic Patten Operation

U

UTC	Universal Time Co-ordinates

V

VFR	Visual Flight Rule
VMC	Visual Meteorological Condition
VR	Visual Reference
VOR	VHF OmniRange Navigatgion System
VOR/DME	VHF Omni-directional Ranging / Distance Measurement Equipment
VSI	Vertical Speed Indicator
Vr	Takeoff Rotation Velocity
Vx	Speed for Best Angle of Climb
Vy	Speed for Best Rate of Climb

W

WCA	Wind Correction Angle
WX	Weather

X

X-C or X/C	Cross Country Flight
X-Wind	Cross Wind
XPDR/XPNDR	Transponder

Flight Grading Program

Training Syllabus

Phase 1 Ground Training

LESSONS OVERVIEW

No	Lesson	Title	Time	Date	Student	Instructor
1	FG 01	What is an Aircraft ?	1 hrs			
2	FG 02	Communications	1 hrs			
3	FG 03	Aviation Terminology, Abbreviation	1 hrs			
4	FG 04	Aircraft General Knowledge	3 hrs			
5	FG 05	Air Law	1 hrs			
6	FG 06	The Theories and Practices of Flight	3 hrs			
7	FG 07	Atmospheric	1 hrs			
8	FG 08	Introduction to Human Factors	2 hrs			
9	FG 09	Introduction to Meteorology	2 hrs			
10	FG 10	Test	1 hrs			
			16 hrs			

What is an Aircraft ? (FG 01)

Course	**APEX Flight Academy Flight Grading Training Course**	**Time**	**01:00**
Text	**Basic Aeronautical Knowledge**		
Equipment	● **Beam Projector** ● **Board** ● **Computer**		
Objective	● **Understanding the definition of the aircraft** ● **Understanding How Engine Provide Thrust** ● **Understanding the stability and Control** ● **Understanding the instruments**		
Table of Contents	**1. The Aircraft** **2. The Air** **3. How Engine Provide thrust** **4. Wings and Wheel** **5. How an Aircraft lifted** **6. Stability & Control** **7. Instruments**		
Evaluation	**Test & Review 1: Supply-type & Selection Type Questions**		
Connecting Subjects and Contents			

◆ Contents & Syllabus

Time (HH:MM)	Syllabus of Lecture	Text/Material
00:05	**1. The Aircraft** The introduction of the aircraft	**Basic Aeronautical Knowledge**
00:05	**2. The Air** The components of the air The properties of the air	**Basic Aeronautical Knowledge**
00:05	**3. How Engine Provide Thrust** The thrust working theory	**Basic Aeronautical Knowledge**
00:10	**4. Wings and Wheel** The clarification of wings and wheel	**Basic Aeronautical Knowledge**
00:10	**5. How an aircraft is lifted**	**Basic Aeronautical Knowledge**
00:15	**6. Stabilities and Control** What is Stability? Stability Versus Control	**Basic Aeronautical Knowledge**
00:10	**7. Instruments**	**Basic Aeronautical Knowledge**

Communications (FG 02)

Course	**APEX Flight Academy Flight Grading Training Course**	**Time**	**01:00**
Text	**Basic Aeronautical Knowledge**		
Equipment	● **Beam Projector** ● **Board** ● **Computer**		
Objective	● **Understanding the Radio-telephony skill** ● **Understanding the VHF COM** ● **Understanding the Standard Words & Phrases** ● **Understanding the ADF** ● **Understanding the Radar** ● **Understanding the Emergency Procedures**		
Table of Contents	**1. Introduction** **2. VHF Radio** **3. Communicating** **4. Standard words & Phrases** **5. ADF** **6. Radar** **7. Emergency Procedures**		
Evaluation			
Connecting Subjects and Contents			

◆ Contents & Syllabus

Time (HH:MM)	Syllabus of Lecture	Text/Material
00:05	**1. Introduction** The introduction of the Radio Communication by Pressure Waves	**Basic Aeronautical Knowledge**
00:05	**2. VHF Radio** Radio Frequencies **VHF Radio**	**Basic Aeronautical Knowledge**
00:05	**3. Communicating** Radio Telephony Technique	**Basic Aeronautical Knowledge**
00:15	**4. Standard words and phrases** Pronunciation of Letters Pronunciation of Numbers Transmission of Time Standard Words and Phrases	**Basic Aeronautical Knowledge**
00:05	**5. ADF** Frequency Usage	**Basic Aeronautical Knowledge**
00:10	**6. Radar** Primary Radar Secondary Radar Transponder	**Basic Aeronautical Knowledge**
00:15	**7. Emergency Procedures** Distress Message Urgency Message Loss of Radio Contact Emergency Locator Transmitter (ELT)	**Basic Aeronautical Knowledge**

Aviation Terminology, Abbreviation (FG 03)

Course	**APEX Flight Academy Flight Grading Training Course**	**Time**	**01:00**
Text	**Basic Aeronautical Knowledge**		
Equipment	● **Beam Projector** ● **Board** ● **Computer**		
Objective	● **Understanding the Terminology of the Aviation** ● **Understanding the General Abbreviation** ● **Understanding the Units of Measurement**		
Table of Contents	**1. Terminology** **2. Abbreviation** **3. Units of Measurement**		
Evaluation			
Connecting Subjects and Contents			

◆ Contents & Syllabus

Time (HH:MM)	Syllabus of Lecture	Text/Material
00:10	**5. Terminology**	**Basic Aeronautical Knowledge**
00:10	**6. Abbreviations**	**Basic Aeronautical Knowledge**
00:40	**7. Units of Measurement** Direction Vertical Distance Time Weight/Mass Temperature Pressure Fuel/Oil Volume Rule of Thumb	**Basic Aeronautical Knowledge**

Aircraft General Knowledge (FG 04)

Course	**APEX Flight Academy Flight Grading Training Course**	**Time**	**03:00**
Text	**Basic Aeronautical Knowledge**		
Equipment	● **Beam Projector** ● **Board** ● **Computer**		
Objective	● **Understanding the aircraft Systems**		
Table of Contents	**1. Structure** **2. Propulsion** **3. Carburetor** **4. Fuel Injection Systems** **5. Diesel Engines** **6. Propellers** **7. Fuel Systems** **8. Electrical System** **9. Hydraulic Systems** **10. Flight Instruments**		
Evaluation			
Connecting Subjects and Contents			

◆ Contents & Syllabus

Time (HH:MM)	Syllabus of Lecture	Text/Material
00:20	**1. Structure** Primary Structure Angle of Incidence Flight Controls Tailplane Flaps Brakes	**Basic Aeronautical Knowledge**
00:20	**2. Propulsion** Four-Stroke Engine Ignition System Firing Sequence Exhaust System Two-Stroke Engine	**Basic Aeronautical Knowledge**
00:15	**3. Carburetor** Carburetor Abnormal Combustion Carburetor and Induction Icing	**Basic Aeronautical Knowledge**
00:15	**4. Fuel Injection Systems** The clarification of wings and wheel	**Basic Aeronautical Knowledge**
00:15	**5. Diesel Engines** Diesel Operation	**Basic Aeronautical Knowledge**
00:20	**6. Propellers** Fixed-Pitch Propellers Constant-Speed Propeller Effect of the Engine-Propeller	**Basic Aeronautical Knowledge**
00:15	**7. Fuel Systems** Priming Fuel Tank Selection by the Pilot Fuel Gauge Fuel System Management	**Basic Aeronautical Knowledge**

Time (HH:MM)	Syllabus of Lecture	Text/Material
00:20	**8. Electrical System** Main Components of the Electrical System Normal Electrical System Operation Abnormal Electrical System Operation Engine and System Abnormal Operation Indications	**Basic Aeronautical Knowledge**
00:20	**9. Hydraulic Systems** Undercarriage Wheel Brakes Hydraulic Fluids	**Basic Aeronautical Knowledge**
00:20	**10. Flight Instruments** Pressure Instruments Gyroscopic Instruments Compass Instruments	**Basic Aeronautical Knowledge**

Air Law (FG 05)

Course	**APEX Flight Academy Flight Grading Training Course**	**Time**	**01:00**
Text	**CAA Air Law**		
Equipment	● **Beam Projector** ● **Board** ● **Computer**		
Objective	● **Understanding the Clarification of the Air Laws** ● **Understanding the Operation Limitations** ● **Understanding the Regulatory requirements**		
Table of Contents	**1. 01-01A Civil Aviation Act** **2. 05-01A Regulations Governing Licenses and Rating for Airmen** **3. 05-03A Medical Examination Standards of Airmen** **4. 07-02A Aircraft Flight Operation Regulations** **5. 09-01A Rules of the Air** **6. eAIP**		
Evaluation	**Test & Review 1: Supply-type & Selection Type Questions**		
Connecting Subjects and Contents			

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Time (HH:MM)	Syllabus of Lecture	Text/Material
00:10	1. 01-01A Civil Aviation Act General Introduction 01-01A	CAA Website
00:10	2. 05-01A Regulations Governing Licenses and Rating for Airmen General Introduction 05-01A	CAA Website
00:10	3. 05-03A Medical Examination Standards of Airmen General Introduction 05-03A	CAA Website
00:10	4. 07-02A Aircraft Flight Operation Regulations General Introduction 07-02A	CAA Website
00:10	5. 09-01A Rules of the Air General Introduction of 09-01A	CAA Website
00:10	6. eAIP General Introduction of eAIP	eAIP Website

The theories and Practices of Flight (FG 06)

Course	**APEX Flight Academy Flight Grading Training Course**	**Time**	**03:00**
Text	**Basic Aeronautical Knowledge**		
Equipment	● **Beam Projector** ● **Board** ● **Computer**		
Objective	● **Understanding the Newton's Law** ● **Understanding the Lift** ● **Understanding the Drag** ● **Understanding the Balance & Trim** ● **Understanding the Aircraft Maneuvers**		
Table of Contents	**1. Dynamics** **2. How Lift is Created** **3. Drag** **4. Balance & Trim** **5. Aircraft Maneuver** **6. Stalling** **7. Circuit & Landing**		
Evaluation			
Connecting Subjects and Contents			

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Time (HH:MM)	Syllabus of Lecture	Text/Material
00:20	**1. Dynamics** Physical Laws of Motion Force, Moments, Work, Energy, Thrust&Power	**Basic Aeronautical Knowledge**
00:40	2. **How Lift is Created** Airflow around an Aeroplane Turbulent Flow Angle of Attack Low Speed Wing Attitude, Flightpath & Angle of Attack	**Basic Aeronautical Knowledge**
00:40	**3. Drag** Total Drag Induced Drag Parasite Drag Drag vs Airspeed	**Basic Aeronautical Knowledge**
00:20	**4. Balance & Trim** What is Balance? What is Trim? Effect of Thrust & Slipstream on Balance & Trim	**Basic Aeronautical Knowledge**
00:30	**5. Aircraft Maneuver** Straight & Level Climbing Descending Turning	**Basic Aeronautical Knowledge**
00:20	**6. Stalling** What is Stability? Stability Versus Control	**Basic Aeronautical Knowledge**
00:10	**7. Circuit & Landing**	**Basic Aeronautical Knowledge**

Atmospheric Effect on Flight (FG 07)

Course	**APEX Flight Academy Flight Grading Training Course**	**Time**	**01:00**
Text	**Basic Aeronautical Knowledge**		
Equipment	● **Beam Projector** ● **Board** ● **Computer**		
Objective	● **Understanding the Atmospheric effect on Flight**		
Table of Contents	**1. Air Density** **2. Wind** **3. Windshear & Wind Gradient** **4. Turbulence**		
Evaluation	**Test & Review 1: Supply-type & Selection Type Questions**		
Connecting Subjects and Contents			

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Time (HH:MM)	Syllabus of Lecture	Text/Material
00:10	**6. Air Density** Air Density Airspeeds	**Basic Aeronautical Knowledge**
00:20	**7. Wind** Taxi Take-off & Initial Climb Climb Cruising Descending Flying at low Altitude Circuit Approach Landing	**Basic Aeronautical Knowledge**
00:10	**8. Windshear & Wind Gradient** Takeoff & Climb Cruise Approach & Landing	**Basic Aeronautical Knowledge**
00:20	**9. Turbulence** Mechanical Thermals Wake Turbulence Thrust-Stream Turbulence	**Basic Aeronautical Knowledge**

Introduction to Human Factors (FG 08)

Course	**APEX Flight Academy Flight Grading Training Course**	**Time**	**02:00**
Text	**Basic Aeronautical Knowledge**		
Equipment	● **Beam Projector** ● **Board** ● **Computer**		
Objective	● **Understanding the Basic Knowledge regarding Human Factor**		
Table of Contents	**1. Environmental Effect** **2. Health & Fitness** **3. Vision & Illusions** **4. Hearing** **5. Balance** **6. Stress** **7. Threat & Error Management**		
Evaluation	**Test & Review 1: Supply-type & Selection Type Questions**		
Connecting Subjects and Contents			

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Time (HH:MM)	Syllabus of Lecture	Text/Material
00:20	**1. Environmental Effect** Atmospheric Pressure Hypoxia Barotrauma Ears Circulation Decompression Hyperventilation Carbon Monoxide Poisoning	**Basic Aeronautical Knowledge**
00:15	**2. Health & Fitness** Diet & Exercise Upper Respiratory Tract Problems Fatigue & Sleep Deprivation Dehydration Headache Medication Coronary Risk Factors Pregnancy Ageing Food Poisoning Smoking Cholesterol Obesity Deep Vein Thrombosis (DVT) Alcohol	**Basic Aeronautical Knowledge**
00:15	**3. Vision & Illusions** The Structure of the Eye Characteristics of Vision Visual Scanning Vision on Approach Visual Illusions Correction and Protection of Vision	**Basic Aeronautical Knowledge**

Time (HH:MM)	Syllabus of Lecture	Text/Material
00:20	**4. Hearing** Ears Structure of the Ear Fatigue & Damage From Noise Loss of Hearing Precautions for Minimizing Hearing Loss	**Basic Aeronautical Knowledge**
00:10	**5. Balance** Rotary Acceleration Linear Acceleration & Tilt	**Basic Aeronautical Knowledge**
00:15	**6. Stress** Stressors Environmental or Physical Stressors Psychological & Emotional Stressors Managing Stress	**Basic Aeronautical Knowledge**
00:25	**7. Threat & Error Management** Threats Errors Undesired Aircraft States The Role of the Pilot in TEM	**Basic Aeronautical Knowledge**

Introduction to Meteorology (FG 09)

Course	**APEX Flight Academy Flight Grading Training Course**	**Time**	**02:00**
Text	**Basic Aeronautical Knowledge**		
Equipment	● **Beam Projector** ● **Board** ● **Computer**		
Objective	● **Understanding the Basic Knowledge of Meteorology**		
Table of Contents	**1. The Atmosphere** **2. Local Weather** **3. Heating Effects in the Atmosphere** **4. Weather Data**		
Evaluation	**Test & Review 1: Supply-type & Selection Type Questions**		
Connecting Subjects and Contents			

◆ Contents & Syllabus

Time (HH:MM)	Syllabus of Lecture	Text/Material
00:30	**1. The Atmosphere** International Standard Atmosphere	**Basic Aeronautical Knowledge**
00:20	**2. Local Weather** Wind Visibility Clouds Thunderstorms Fog	**Basic Aeronautical Knowledge**
00:40	**3. Heating Effects in the Atmosphere** Inversion Winds Turbulence Windshear Clouds	**Basic Aeronautical Knowledge**
00:30	**4. Weather Data** Forecasts Aerodrome Weather Reports Automatic Terminal Information Service	**Basic Aeronautical Knowledge**

Test (FG 10)

Course	**APEX Flight Academy Flight Grading Training Course**	**Time**	**01:00**
Text			
Equipment			
Objective	● **Understanding the Students Learning Progress**		
Table of Contents	**FG 011 What is an Aircraft?** **FG 012 Communications** **FG 013 Aviation Terminology, Abbreviation** **FG 014 Aircraft General Knowledge** **FG 015 Air Law** **FG 016 The Theories and Practices of Flight** **FG 017 Atmospheric Effect on Flight** **FG 018 Introduction to Human Factors** **FG 019 Introduction to Meteorology**		
Evaluation	**Supply – type & Selection Type Questions.**		
Connecting Subjects and Contents	**Flight Grading Program Flight Training Syllabus**		

◆ Contents & Syllabus

Time (HH:MM)	Syllabus of Lecture	Text/Material
00:10	**5. Air Density** Air Density Airspeeds	**Basic Aeronautical Knowledge**
00:20	**6. Wind** Taxi Take-off & Initial Climb Climb Cruising Descending Flying at low Altitude Circuit Approach Landing	**Basic Aeronautical Knowledge**
00:10	**7. Windshear & Wind Gradient** Takeoff & Climb Cruise Approach & Landing	**Basic Aeronautical Knowledge**
00:20	**8. Turbulence** Mechanical Thermals Wake Turbulence Thrust-Stream Turbulence	**Basic Aeronautical Knowledge**

Flight Grading Program

Training Syllabus

Phase 2 Flight Training

LESSONS OVERVIEW

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Dual-FTD	Dual-FTD	Dual-DA40NG	Dual-DA40NG	**Evaluation DA40NG**
1.5 hours	1.5 hours	1.5 hours	1.5 hours	1.5 hours

Total: 4.5 hours in Single Engine Aircraft + 3.0 hours in FTD

Lesson: 1 Dual – FTD

	Pre/Po	Dual	FTD	Inst.	X-C	Solo	Night
Recommended	**1.0**		**1.5**				
This Lesson 1-1							
This Lesson 1-2							
This Lesson 1-3							
Total to Date							
Recommended	**1.0**		**1.5**				

Objectives:

This lesson will introduce the student to the operations of the DA40NG systems. The instructor pilot has to explain and demonstrate clearly each task so that the student can practice with instructor supervision on the next lesson. Before the session in the FTD, the instructor must conduct a thorough pre-flight briefing.

TASK	1	2	3
Operating the G1000 - Introduction			
Use of Checklists - Introduction			
Engine Start/Run-up - Introduction			
Normal and Cross Wind Taxi - Introduction			
Before Takeoff Check and Run-up - Introduction			
Normal Takeoff and Climb - Introduction			
Flight by Outside Visual References - Introduction			
Cruise Check- Introduction			
Straight and Level Flight - Introduction			
Trim (Exercises in Various Configurations and			

Airspeeds) - Introduction			
Training Area Procedures - Introduction			
Shallow/Medium Banked Turns - Introduction			
Descents - Introduction			
Traffic Pattern Entry - Introduction			
Basic ATC Communications - Introduction			
Normal Landing - Introduction			
Engine shutdown procedures - Introduction			

Completion Standards:

The Student will be able to describe the elements of each task, also should be able to explain the basic concepts, principles and procedures used by Apex Flight Academy.

Comments:

	1	2	3
DATE			
IP'S SIGNATURE			

Lesson: 2 Dual – FTD

	Pre/Po	Dual	FTD	Inst.	X-C	Solo	Night
Recommended	**1.0**		**1.5**				
This Lesson 2-1							
This Lesson 2-2							
This Lesson 2-3							
Total to Date							
Recommended	**2.0**		**3.0**				

Objectives:

This lesson will review the tasks introduced in the first lesson with the exception of steep turns. The instructor must conduct a thorough pre-flight briefing to review with the student pilot the basic concepts, principles, and procedures of each task.

TASK	1	2	3
Operating the G1000 - Practice			
Use of Checklists - Practice			
Engine Start/Run-up - Practice			
Normal and Cross Wind Taxi - Practice			
Before Takeoff Check and Run-up - Practice			
Normal Takeoff and Climb - Practice			
Flight by Outside Visual References - Practice			
Cruise Check- Practice			
Straight and Level Flight - Practice			
Trim (Exercises in Various Configurations and Airspeeds) - Practice			

Training Area Procedures - Practice			
Shallow/Medium Banked Turns - Practice			
Steep Turns - Introduction			
Descents - Practice			
Traffic Pattern Entry - Practice			
Basic ATC Communications - Practice			
Normal Landing - Practice			
Engine shutdown procedures - Practice			

Completion Standards:

The student will demonstrate an understanding of each task in the lesson. Student pilot should be able to execute the tasks with coaching and assistance of the instructor to correct deviations and errors.

Comments:

	1	2	3
DATE			
IP'S SIGNATURE			

Lesson: 3 Dual – Local – DA40NG

	Pre/Po	Dual	FTD	Inst.	X-C	Solo	Night
Recommended	**1.0**	**1.5**					
This Lesson 3-1							
This Lesson 3-2							
This Lesson 3-3							
Total to Date							
Recommended	**3.0**	**1.5**	**3.0**				

Objectives:

This lesson will review the tasks practiced in the FTD. The student is introduced to the real aircraft. The instructor must conduct a thorough pre-flight briefing to describe safety procedures associated with the operations in the real aircraft and review any task the student pilot.

TASK	1	2	3
Operating the G1000 - Practice			
Use of Checklists - Practice			
Engine Start/Run-up - Practice			
Normal and Cross Wind Taxi - Practice			
Before Takeoff Check and Run-up - Practice			
Normal Takeoff and Climb - Practice			
Flight by Outside Visual References - Practice			
Cruise Check- Practice			
Straight and Level Flight - Practice			
Trim (Exercises in Various Configurations and Airspeeds) - Practice			

Training Area Procedures - Practice			
Shallow/Medium Banked Turns - Practice			
Steep Turns - Practice			
Descents - Practice			
Traffic Pattern Entry - Practice			
Traffic Pattern Procedure - Introduction			
Basic ATC Communications - Practice			
Normal Landing - Practice			
Engine shutdown procedures - Practice			

Completion Standards:

The student will be able to execute the tasks with coaching and assistance from instructor to correct deviations and errors. The traffic pattern procedure is only introduced at this stage. Therefore, the student pilot should be able to explain the basic concepts and principles of the procedure.

Comments:

	1	2	3
DATE			
IP'S SIGNATURE			

Lesson: 4 Dual – Local – DA40NG

	Pre/Po	Dual	FTD	Inst.	X-C	Solo	Night
Recommended	**1.0**	**1.5**					
This Lesson 4-1							
This Lesson 4-2							
This Lesson 4-3							
Total to Date							
Recommended	**4.0**	**3.0**	**3.0**				

Objectives:

The Student will review and increase proficiency in the tasks practiced during the previous lessons. The instructor must conduct a thorough pre-flight briefing to discuss issues the student pilot is experiencing during the program and find ways to correct them.

TASK	1	2	3
Operating the G1000 - Practice			
Use of Checklists - Practice			
Engine Start/Run-up - Practice			
Normal and Cross Wind Taxi - Practice			
Before Takeoff Check and Run-up - Practice			
Normal Takeoff and Climb - Practice			
Flight by Outside Visual References - Practice			
Cruise Check- Practice			
Straight and Level Flight - Practice			
Trim (Exercises in Various Configurations and Airspeeds) - Practice			

Training Area Procedures - Practice			
Shallow/Medium Banked Turns - Practice			
Steep Turns - Practice			
Descents - Practice			
Traffic Pattern Entry - Practice			
Traffic Pattern Procedure - Practice			
Basic ATC Communications - Practice			
Normal Landing - Practice			
Engine shutdown procedures - Practice			

Completion Standards:

The student will demonstrate the ability to perform the above tasks with some instructor guidance and assistance. At this stage, the student should be able to perform at least straight and level flight, shallow/medium turns, climbs, descents, checklist usage, normal take off, and taxi.

Comments:

	1	2	3
DATE			
IP'S SIGNATURE			

Lesson: 5 Evaluation – DA40NG

	Pre/Po	Dual	FTD	Inst.	X-C	Solo	Night
Recommended	**1.5**	**1.5**					
This Lesson 5-1							
This Lesson 5-2							
This Lesson 5-3							
Total to Date							
Recommended	**5.5**	**4.5**	**3.0**				

Objectives:

This lesson will be conducted by the Chief Flight Instructor, Assistant Chief Flight Instructor, or approved VFR Check Instructor. The student has to show the abilities has gained in the previous lessons with minimal input from instructor. The instructor can provide assistance to correct deviations and errors, but a comment shall be made in the lesson any time the instructor has to take over the aircraft control.

TASK	1	2	3
Operating the G1000 - Perform			
Use of Checklists - Perform			
Engine Start/Run-up - Perform			
Normal and Cross Wind Taxi - Perform			
Before Takeoff Check and Run-up - Perform			
Normal Takeoff and Climb - Practice			
Flight by Outside Visual References - Perform			
Cruise Check- Perform			
Straight and Level Flight - Perform			

Trim (Exercises in Various Configurations and Airspeeds) - Perform			
Training Area Procedures - Perform			
Shallow/Medium Banked Turns - Perform			
Steep Turns - Practice			
Descents - Perform			
Traffic Pattern Entry - Practice			
Traffic Pattern Procedure - Practice			
Basic ATC Communications - Practice			
Normal Landing - Practice			
Engine shutdown procedures - Practice			

Completion Standards:

The student is able to perform basic maneuvers with minimal assistance from instructor, holding altitude within 150 feet, airspeed within 10 knots, and heading within 10 degrees. Traffic pattern and normal landing is expected to be assisted by the instructor, but the student has to understand the concepts and principles associated with the procedure.

Final Comments:

	1	2	3
DATE			
IP'S SIGNATURE			