

Note This Class has Monday Work!!

August 8-12

Class Introduction and Orientation

1. Teacher Introduction
2. Classroom and Learning Rules
3. Grading System
4. White Board and Cabinets Orientation
5. Chrome Books Sites we will use.
6. Classroom Contracts

August 16-19

Unit 1 - Getting to Know Aircraft

Pre-Course Exam

Section A – Introduction Lesson 1 You Can Fly!

Lesson 1 You Can Fly!

Section B - Categories and Classes of Aircraft

Lesson 1 Classifying Aircraft

Lesson 2 Classifying UAS

August 23-26

Section C – Design Considerations for Aircraft

Lesson 1 Aircraft Roles and Mission-1

Lesson 1 Aircraft Roles and Mission-2

Unit 1 Exam

Unit 2: How Aircraft Are Made

Section A – Identifying Parts of the Aircraft

Lesson 1 Manned Aircraft Components-1

August 30-Sept 2

Monday - Lesson 1 Manned Aircraft Components-2

Lesson 1 Manned Aircraft Components-3

Lesson 2 Unmanned Aircraft Components

Section B – Aircraft Construction

Lesson 1 Aircraft Structural Materials-1

Lesson 1 Aircraft Structural Materials-2

Sept 6-9

Monday - Lesson 2 Aircraft Safety Features-1

Lesson 2 Aircraft Safety Features-2

Lesson 3 Unmanned Aircraft Materials

**** **Unit 2 Exam** ****

Unit 3: Understanding Air

Section A – Characteristics of Air

Lesson 1 Air is a Fluid-1

Sept 13-16

Monday - Lesson 1 Air is a Fluid-2

Lesson 2 Air Density-1

Lesson 2 Air Density-2

Lesson 2 Air Density-3

Section B – Aeronautical Applications of Air Density

Lesson 1 Density Altitude-1

Sept 20-23 --Grades Go In

Monday - Lesson 1 Density Altitude-2

Lesson 1 Density Altitude-3

Section B – Aeronautical Applications of Air Density

Lesson 1 Density Altitude-1

Lesson 1 Density Altitude-2

Lesson 1 Density Altitude-3

Break Sept 26-30

Oct 4-7

Unit 3 Exam Review

Unit 3 Exam

Unit 4: Forces of Flight

Section A – The Aircraft in Motion

Lesson 1 Understanding Motion-1

Lesson 1 Understanding Motion-1

Oct 11-14

Monday - Lesson 2 Four Forces-1

Lesson 2 Four Forces-2

Lesson 3 Vectors of Flight

Section B – Lift

Lesson 1 Theories of Lift-1

Lesson 1 Theories of Lift-2

Oct 18-21

Monday - Lesson 2 Airfoils and Lift Production-1

Lesson 2 Airfoils and Lift Production-2

Lesson 3 Calculating Lift-1

Lesson 3 Calculating Lift-2

Lesson 4 Aerodynamic Stalls-1

Oct 24-28

Monday - Lesson 4 Aerodynamic Stalls-2

Lesson 4 Aerodynamic Stalls-3

Section C - Weight

Lesson 1 Aircraft Weight and Balance-1

Lesson 1 Aircraft Weight and Balance-2

Lesson 1 Aircraft Weight and Balance-3

Nov 1-4

Monday - Lesson 1 Aircraft Weight and Balance-4

Lesson 1 Aircraft Weight and Balance-5

Section D - Thrust

Lesson 1 In Thrust We Trust-1

Lesson 1 In Thrust We Trust-2

Lesson 1 In Thrust We Trust-3

Nov 8-10 No School 11th

Section E - Drag

Lesson 1 What a Drag!-1

Lesson 1 What a Drag!-2

Lesson 1 What a Drag!-3

Unit 4 Exam

Nov 15-18

Unit 5: Aircraft Stability and Control

Section A – Types of Stability

Monday - Lesson 1 Stability in Aircraft Design-1

Lesson 1 Stability in Aircraft Design-2

Lesson 1 Stability in Aircraft Design-3

Lesson 2 Rotorcraft Lift and Stability-1

Lesson 2 Rotorcraft Lift and Stability-2

Note This Class has Monday Work!!

*****Thanks Giving Break Nove 20-24*****

Nov 28-Dec 2

Section B – Aircraft Flight Controls

Monday - Lesson 1 Primary Flight Controls-1

Lesson 1 Primary Flight Controls-2

Lesson 2 Secondary Flight Controls

Lesson 3 Flight Controls for Unmanned Aircraft

Section C – Structural Loads Encountered in Flight

Lesson 1 Turns and Turning Flight

Dec 6-9

Monday - Lesson 2 Load Limits in Aircraft Design-1

Lesson 2 Load Limits in Aircraft Design-2

Unit 5 Exam

Unit 6: Career Skills

Section A – Career Preparation

Lesson 1 Job Application Practice

Lesson 2 Resume Development

Dec 13-16

Lesson 3 Building/Revising Your Career Portfolio-1

Lesson 3 Building/Revising Your Career Portfolio-2

Post-Course Exam Review

Post-Course Exam

******Grades Go In******

*****Winter Break Dec 19- Jan 6*****

SECOND SEMESTER

Jan 10-13

Unit 7: Propulsion

Pre-Course Exam

Section A – Pistons

Lesson 1 Reciprocating Engines-1

Lesson 1 Reciprocating Engines-2

Lesson 1 Reciprocating Engines-3

Jan 17-20

Lesson 1 Reciprocating Engines-4

Lesson 1 Reciprocating Engines-5

Lesson 2 Propellers-1

Lesson 2 Propellers-2

Jan 24-27

Lesson 3 The Power Cycle - Intake Systems-1

Lesson 3 The Power Cycle - Intake Systems-2

Lesson 3 The Power Cycle - Intake Systems-3

Lesson 4 The Power Cycle - Combustion and Exhaust-1

Jan 31 - Feb 3

Lesson 4 The Power Cycle - Combustion and Exhaust-2

Lesson 4 The Power Cycle - Combustion and Exhaust-3

Lesson 4 The Power Cycle - Combustion and Exhaust-4

Lesson 5 Turbochargers and Superchargers

Feb 7-10

Section B – Jets

Lesson 1 Turbine Engines-1

Lesson 1 Turbine Engines-2

Section C – Powering UAS

Lesson 1 UAS Engines and Fuel-1

Lesson 1 UAS Engines and Fuel-2

Unit 7 Exam

Feb 14-17 ---Grades Go In

Unit 8: Airframe Systems

Section A – Primary Airframe Systems

Lesson 1 Fuel Systems-1

Lesson 1 Fuel Systems-2

Lesson 1 Fuel Systems-3

Lesson 1 Fuel Systems-4

*****No School Feb 20-24*****

Feb 28-Mar 3

Lesson 2 Electrical Systems-1

Lesson 2 Electrical Systems-2

Lesson 3 Hydraulics and Landing Gear-1

Lesson 3 Hydraulics and Landing Gear-2

Mar 7-10

Lesson 3 Hydraulics and Landing Gear-3

Section B – High Altitude and Weather Systems

Lesson 1 Pressurization and Oxygen Systems-1

Lesson 1 Pressurization and Oxygen Systems-2

Lesson 2 Anti-Icing Systems-1

Mar 14-17

Lesson 2 Anti-Icing Systems-2

Lesson 2 Anti-Icing Systems-3

Unit 8 Exam

Unit 9: Avionics and Flight Instruments

Section A – Pitot-Static System

Lesson 1 Altimeter and VSI-1

Mar 21-24

Lesson 1 Altimeter and VSI-2

Lesson 1 Altimeter and VSI-3

Lesson 2 Airspeed Indicator-1

Lesson 2 Airspeed Indicator-2

Lesson 2 The Magnetic Compass-2

Mar 28-31

Lesson 3 Pitot-Static Failures

Section B – Gyros and Compasses

Lesson 1 Gyroscopic Instruments-1

Lesson 1 Gyroscopic Instruments-2

Lesson 1 Gyroscopic Instruments-3

Note This Class has Monday Work!!

April 4-6 no school on 7th

Lesson 1 Gyroscopic Instruments-4

Lesson 2 The Magnetic Compass-1

Section C – Electronic Instruments

Lesson 1 Electronic Flight Displays

Unit 9 Exam

April 18-21

Unit 10: Required Documentation

Section A – Aircraft Documents

Lesson 1 AFM/POH

Lesson 2 Registration and Airworthiness Certificates

Lesson 3 Inspections-1

Lesson 3 Inspections-2

NO School **April 11 -14 Easter**

April 25-28

Lesson 3 Inspections-3

Section B – Maintenance Documents

Lesson 1 Preventive Maintenance and Airworthiness
Directives

Section C – Pilot Responsibilities

Lesson 1 Acting as Pilot In Command-1

Lesson 1 Acting as Pilot In Command-2

May 2-5

Unit 10 Exam

**Unit 11: End of Semester Project and Career
Development**

Section A – End of Semester Project

Lesson 1 Design an Airplane-1

May 9-12

Lesson 1 Design an Airplane-1

Lesson 1 Design an Airplane-1

Lesson 1 Design an Airplane-1

Lesson 1 Design an Airplane-1

May 16-19

Lesson 1 Design an Airplane-1

Lesson 1 Design an Airplane-1

Section B – Growing Your Skills

Lesson 1 Mentoring

May 23-26

Lesson 2 Work-Based Learning Experiences-1

Lesson 2 Work-Based Learning Experiences-2

Post-Course Exam

Reflection

May 30 - June 2

MAP Testing