

Gleim Commercial Pilot Syllabus

Sixth Edition, First Printing

Updates

September 2019

NOTE: Sections with changes are indicated by a vertical bar in the left margin. Text that should be deleted is displayed with a line through it. New text is shown with blue underlined font.

If you are tested on any content not represented in our materials or this update, please share this information with Gleim so we can continue to provide the most complete test preparation experience possible. You can submit feedback at www.GleimAviation.com/questions. Thank you in advance for your help!

These edits include updated references to Gleim materials throughout the syllabus.

Part I – Commercial Pilot Ground Training Syllabus Airplane Single-Engine Land

Page 22, Ground Lesson 3, Text References:

<i>Pilot Handbook</i> Study Unit 3 Contents	<i>Commercial Pilot FAA Knowledge Test Prep</i> Study Unit 3 Contents
3.1 Runway and Taxiway Markings 3.2 Airport Lighting 3.3 Visual Glideslope Indicators 3.4 Wind and Landing Direction Indicators and Segmented Circles 3.5 Airport Traffic Patterns 3.6 Land and Hold Short Operations (LAHSO) 3.7 Wake Turbulence 3.8 Collision Avoidance 3.9 Radio Communications and Phraseology 3.10 Airports without an Operating Control Tower 3.11 Automated Weather Reporting Systems 3.12 Airports with an Operating Control Tower 3.13 Automatic Terminal Information Service (ATIS) 3.14 Ground Control 3.15 Tower Control 3.16 Approach Control and Departure Control (for VFR Aircraft) 3.17 Clearance Delivery 3.18 Emergencies 3.19 Radio Failure Procedures 3.20 Emergency Locator Transmitter (ELT) 3.21 ATC Radar 3.22 Transponder Operation 3.23 Radar Services to VFR Aircraft 3.24 General Dimensions of Airspace 3.25 Controlled and Uncontrolled Airspace 3.26 Class A Airspace 3.27 Class B Airspace 3.28 Class C Airspace 3.29 Class D Airspace 3.30 Class E Airspace 3.31 Class G Airspace 3.32 Special-Use Airspace 3.33 Other Airspace Areas 3.34 Special Flight Rules Areas 3.35 Next Generation Air Transportation System (NextGen)	3.1 Airspace 3.2 Airport Signs/Markings 3.3 Collision Avoidance 3.4 Wake Turbulence 3.5 Land and Hold Short Operations (LAHSO) 3.6 Segmented Circles

Page 23, Ground Lesson 4, Text References:

<i>FAR/AIM Contents</i>	Sections	<i>Commercial Pilot FAA Knowledge Test Prep Study Unit 4 Contents</i>
Part 1 -- Definitions and Abbreviations Part 61 -- Certification: Pilots, Flight Instructors, and Ground Instructors Part 91 -- General Operating and Flight Rules Part 119 -- Certification: Air Carriers and Commercial Operators NTSB Part 830 -- Notification and Reporting of Aircraft Accidents or Incidents and Overdue Aircraft, and Preservation of Aircraft Wreckage, Mail, Cargo, and Records	91.1-.417 119.1	4.1 14 CFR Part 1 4.2 14 CFR Part 21 4.2 3 14 CFR Part 23 4.4 14 CFR Part 39 4.5 14 CFR Part 43 4.3 6 14 CFR Part 61 4.4 7 14 CFR Part 91 4.5 8 14 CFR Part 119 4.6 9 NTSB Part 830 4.7 10 Near Midair Collision Reporting

Page 28, Ground Lesson 8, Text References:

<i>Pilot Handbook Study Unit 8 Contents</i>	<i>Commercial Pilot FAA Knowledge Test Prep Study Unit 8 Contents</i>
8.1 Flight Service Station (FSS) 8.2 Aviation Routine Weather Report (METAR) 8.3 Pilot Weather Report (PIREP) 8.4 Terminal Aerodrome Forecast (TAF) 8.5 Aviation Area Forecast (FA) 8.6 Graphical Forecasts for Aviation (GFA) 8.7 In-Flight Aviation Weather Advisories 8.8 Winds and Temperatures Aloft Forecast (FB) 8.9 Surface Analysis Chart 8.10 Ceiling and Visibility Analysis (CVA) 8.11 Radar Observations 8.12 Short-Range Surface Prognostic (PROG) Chart 8.13 Low-Level Significant Weather (SIGWX) Chart 8.14 DUATS 8.1 5 ¹⁴ Leidos Flight Service Online 8.1 6 ¹⁵ Aviation Weather Resources on the Internet	8.1 Sources of Weather Information 8.2 Aviation Routine Weather Report (METAR) 8.3 Pilot Weather Report (PIREP) 8.3 4 Surface Analysis Chart 8.4 Constant Pressure Charts 8.5 Terminal Aerodrome Forecast (TAF) 8.6 In-Flight Weather Advisories 8.7 Low-Level and High-Level Prognostic Charts 8.8 Surface Prog Charts 8.8 9 Other Charts and Forecasts

Page 29, Ground Lesson 9, Text References:

<i>Pilot Handbook</i> Study Unit 9 Contents	<i>Commercial Pilot FAA Knowledge Test Prep</i> Study Unit 9 Contents
9.1 VFR Navigation Charts 9.2 Longitude and Latitude 9.3 Sectional Chart Symbology 9.4 FAA Advisory Circulars (ACs) 9.5 <i>Aeronautical Information Manual (AIM)</i> 9.6 Chart Supplement U.S. 9.7 Notice to Airmen (NOTAM) System 9.8 Flight Computers 9.9 The Gleim Flight Computer 9.10 The Calculator Side of the Flight Computer 9.11 Conversion of Nautical Miles to Statute Miles and Vice Versa 9.12 Speed, Distance, and Time Computations 9.13 Fuel Computations 9.14 True Airspeed and Density Altitude 9.15 Corrected (Approximately True) Altitude 9.16 Off-Course Correction 9.17 Radius of Action 9.18 Other Conversions 9.19 Temperature Conversions 9.20 The Wind Side of the Gleim Flight Computer 9.21 Determining Magnetic Heading and Groundspeed 9.22 Determining Wind Direction and Speed 9.23 Determining Altitude for Most Favorable Winds 9.24 Alternative: E6B Computer Approach to Magnetic Heading 9.25 Information Side of Sliding Card (Gleim E6B) 9.26 Electronic Flight Computers 9.27 ASA CX-2 9.28 Sporty's E6B	9.1 Sectional Charts 9.2 Chart Supplements 9.23 IFR En Route Low Altitude Charts 9.34 Instrument Approach Charts 9.45 Fuel Consumption 9.56 Wind Direction and Speed 9.67 Time, Compass Heading, Etc., on Climbs and En Route 9.78 Time, Compass Heading, Etc., on Descents

Page 30, Ground Lesson 10, Text References:

<i>Pilot Handbook</i> Study Unit 10 Contents	<i>Commercial Pilot FAA Knowledge Test Prep</i> Study Unit 10 Contents
10.1 Characteristics of Radio Waves 10.2 VHF Omnidirectional Range (VOR) 10.3 Distance-Measuring Equipment (DME) 10.4 Automatic Direction Finder (ADF) 10.5 Radio Magnetic Indicator (RMI) 10.6 Area Navigation (RNAV) 10.7 VORTAC-Based RNAV 10.8 Global Positioning System (GPS)	10.1 VOR Use and Receiver Checks 10.2 Horizontal Situation Indicator (HSI) 10.3 Global Positioning System (GPS) 10.4 Pilotage and Dead Reckoning

Part II – Commercial Pilot Ground Training Syllabus Airplane Multi-Engine Land Add-On Rating

Page 107, Ground Lesson 3, Text References:

Multi-Engine Add-On Rating Course Study Unit 3 Contents	
3.1	General
3.2	Fuel Systems
3.3	Oil System
3.4	Trim and Primary Flight Control Systems
3.5	Flaps, Leading Edge Devices, and Spoilers
3.6	Powerplant
3.7	Propellers
3.8	Electrical Systems
3.9	Landing Gear
3.10	Environmental System
3.11	Deicing and Anti-icing
3.12	Pitot-Static System, Vacuum/Pressure System, and Associated Flight Instruments

Page 110, Ground Lesson 6, Text References:

Multi-Engine Add-On Rating Course Study Unit 6 Contents	
6.1	General
6.2	Preflight Inspection Assessment (Task II.A.)
6.3	Cockpit Flight Deck Management (Task II.B.)
6.4	Engine Starting (Task II.C.)
6.5	Taxiing (Task II.D.)
6.6	Runway Incursion Avoidance Before Takeoff Check (Task II.F.)
6.7	Before Takeoff Check (Task II.G.)
6.8	Normal and Crosswind Takeoff and Climb (Task IV.A.)
6.9	Normal and Crosswind Approach and Landing (Task IV.B.)
6.10	Short-Field Takeoff and Maximum Performance Climb (Task IV.C.)
6.11	Short-Field Approach and Landing (Task IV.D.)
6.12	Steep Turns (Task V.A.)
6.13	Maneuvering During Slow Flight (Task VII.A.)
6.14	Power-Off Stalls (Task VII.B.)
6.15	Power-On Stalls (Task VII.C.)
6.16	Accelerated Stalls (Task VII.D.)

Page 111, Ground Lesson 7, Text References:

Multi-Engine Add-On Rating Course Study Unit 7 Contents	
7.1	General
7.2	Emergency Descent (Task VIII.X.A.)
7.3	Systems and Equipment Malfunctions (Task IX.C.)
7.34	Engine Failure During Takeoff Before V_{MC} (Simulated) (Task VIII.B.IX.E.)
7.45	Engine Failure After Lift-Off (Simulated) (Task VIII.C.IX.F.)
7.56	Approach and Landing with an Inoperative Engine (Simulated) (Task VIII.D.IX.G.)
7.6	Systems and Equipment Malfunctions (Task VIII.E.)
7.7	Maneuvering with One Engine Inoperative (Task X.A.)
7.8	V_{MC} Demonstration (Task X.B.)
7.9	One Engine Failure During Flight (By Inoperative (Simulated) (solely by Reference to Instruments) During Straight-and-Level Flight and Turns (Task X.C.)
7.10	Instrument Approach — One Engine — and Landing with an Inoperative (By Engine (Simulated) (solely by Reference to Instruments) (Task X.D.)

Page 112, Ground Lesson 8, Text References:

Multi-Engine Add-On Rating Course, Study Unit 8, “Your FAA Practical Test,”
Subunits 1-~~8~~[7](#), ~~40~~[9](#)

Multi-Engine Add-On Rating Course Study Unit 8 Contents	
8.1	General
8.2	FAA Practical Test Airman Certification Standards
8.3	What to Take to Your Practical Test
8.4	Performance and Limitations (Task I.F.)
8.5	Operation of Systems (Task I.G.)
8.6	Principles of Flight — Engine Inoperative (Task I.H.)
8.7	Spin Awareness (Task VII.E.)
8.8	Emergency Equipment and Survival Gear (Task VII.F.IX.D.)
8.40	9 The Flight Portion of Your Practical Test

Page 113, Ground Lesson 9, Text References and Completion Standards:

Multi-Engine Add-On Rating Course, Study Unit 8, “Your FAA Practical Test,” Subunit ~~9~~[8](#),
“~~Oral Exam Guide~~” (~~40~~ pages)

Multi-Engine Add-On Rating Course Study Unit 8 Contents	
8.9	8 Oral Exam Guide

Completion Standards

The lesson will have been successfully completed when the pilot reviews the Oral Exam Guide, provided as a link in Study Unit 8, Subunit ~~9~~[8](#), of the Gleim Multi-Engine Add-On Rating Course, and displays to his or her instructor a satisfactory level of understanding through oral quizzing according to the current Airman Certification Standards.

Part II – Commercial Pilot Flight Training Syllabus Airplane Multi-Engine Land Add-On Rating

Page 117, Flight Lesson 1, Content:

2. New items

- Pilot qualifications - FM 3
 - Airworthiness requirements - FM 4
 - Operation of systems - FM 9; MARC 3, 8.5; POH 1, 7, 8, 9
 - Performance and limitations - FM 8; MARC 5, 8.4; POH 2, 5, 6
 - Preflight inspection - FM 11; MARC 6.2; POH 4
 - Flight deck management - FM 12; MARC 6.3
 - Engine starting - FM 13; MARC 6.4; POH 4
 - Taxiing - FM 14; MARC 6.5
 - Before-takeoff check - FM 15; MARC 6.7⁶; POH 4
 - Normal and crosswind takeoff and climb - FM 18; MARC 6.8⁷; POH 4
 - Traffic patterns - FM 17
 - Runway incursion and collision avoidance - FM 14; MARC 4.9, 4.10
 - Normal and crosswind approach and landing - FM 19; MARC 6.9⁸; POH 4
 - After landing, parking, and securing - FM 46; POH 4
 - Additional items at CFI's discretion _____
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Page 118, Flight Lesson 2, Content:

4. New items

- Maneuvering during slow flight - FM 35; MARC 6.13²
 - Power-off stalls (straight ahead and in turning flight) - FM 36; MARC 6.14³
 - Power-on stalls (straight ahead and in turning flight) - FM 37; MARC 6.15⁴
 - Accelerated stalls - FM 38; MARC 6.16⁵
 - Spin awareness - FM 39; MARC 8.7⁶; POH 2
 - Additional items at CFI's discretion _____
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Page 119, Flight Lesson 3, Content:

4. New items

- Steep turns - FM 26; MARC 6.12¹
 - Short-field takeoff and maximum performance climb - FM 22; MARC 6.49⁹
 - Short-field approach and landing - FM 23; MARC 6.14⁰
 - Go-around/rejected landing - FM 25; POH 4
 - High altitude operations - FM 40, 41; POH 7, 8
 - Additional items at CFI's discretion _____
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Page 121, Flight Lesson 5, Content:

4. New items

- Systems and equipment malfunctions - FM 44; MARC 7.6~~3~~; POH 3, 9
 - Maneuvering with one engine inoperative - MARC 7.7,~~8-6~~
 - V_{MC} demonstration - MARC 7.8
 - Partial panel instrument flying skills (IR) - CFI
 - Loss of primary flight instrument indicators (IR) - CFI
 - Constant airspeed climbs and descents (IR) - CFI
 - Magnetic compass turns (IR) - CFI
 - Timed turns (IR) - CFI
 - Recovery from unusual attitudes (IR) – CFI
 - Additional items at CFI's discretion _____
-

IR means instrument references only

Page 122, Flight Lesson 6, Content:

4. New items

- Engine failure during takeoff before V_{MC} - MARC 7.3~~4~~
 - Engine failure during takeoff after lift-off - MARC 7.4~~5~~
 - Emergency descent - MARC 7.2
 - Engine failure during flight by reference to instruments (IR)* - MARC 7.9
 - Instrument approaches – one engine inoperative (IR)* - MARC 7.10
 - Additional items at CFI's discretion _____
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*These tasks need only be completed if the pilot currently holds an instrument rating or seeks to add one during the multi-engine practical test. These tasks should be completed using whatever equipment is installed and available in the training airplane.