



## Membership Certification Standards

# P2 Instrument Rating (IR) ASEL:

### Using the Member Certification Standards (MCS):

The MCS consists of **Areas of Operation** arranged in a logical sequence, beginning with Preflight Preparation and ending with Postflight Procedures. Each Area of Operation includes **Tasks** appropriate to that Area of Operation. Each Task begins with an **Objective** stating what the member should know, consider, and/or do. The MCS then lists the aeronautical knowledge, risk management, and skill elements relevant to the specific Task, along with the conditions and standards for acceptable performance. The MCS uses **Notes** to emphasize special considerations. The MCS uses the terms "will" and "must" to convey directive (mandatory) information. The term "may" denotes items that are recommended but not required. The coding of each Task's elements indicate an area that should be taught and examined or demonstrated. For example, in Tasks such as "Airplane Flight Instruments and Navigation Equipment" (IR.I.A.K1a), the member should be prepared for questions on the meaning, use, and operation of: VOR, DME, ILS and marker beacon receiver/indicators systems.

Each Task in the MCS is coded according to a scheme that includes four elements. For example: **IR.II.A.K1**

- **IR** = Applicable MCS (Instrument Rating – Airplane Single Engine Land)
- **II** = Area of Operation (Preflight Procedures)
- **A** = Task (Airplane Flight Instruments and Navigation Equipment)
- **K1a** = Task Element Knowledge (Operation of airplane's navigation system(s) including: VOR, DME, ILS, marker beacon receiver/indicators)

### Checkride Examination Requirements

Examination must be flown entirely without the use of a flight director or autopilot.

Weather must be set so the member is flying under IMC conditions to non-precision approach minimums being used for the checkride. Weather settings, at the examiners discretion, may also be adjusted during the checkride to allow for various maneuvers, like circling, to be completed.

## Pilot Rating Aircraft Requirements

Aircraft allowed to be used for this pilot rating must be:

- Fixed wing
- Non-Complex (No retractable gear or controllable pitch propellers)
- Single engine and Piston driven
- Max Gross weight less than 5670kg (12,500lbs)

## Table Of Contents:

<b>P2 Instrument Rating (IR) ASEL:</b>	<b>1</b>
Using the Member Certification Standards (MCS):	1
Checkride Examination Requirements	1
Pilot Rating Aircraft Requirements	2
<b>Areas of Operation</b>	<b>4</b>
Preflight Preparation	4
A. Pilot Qualifications and Aircraft Airworthiness	4
B. Weather Information	4
C. Cross Country Planning	5
Preflight Procedures	6
A. Airplane Flight Instruments and Navigation Equipment	6
Air Traffic Control Clearances and Procedures	7
A. Compliance with Air Traffic Control Clearances	7
B. Holding Procedures	8
Flight by Reference to Instruments	9
A. Instrument Flight	9
Navigation Systems	9
A. Intercepting and Tracking Navigational Systems and Arcs	9
B. Departure, En Route, and Arrival Operations	10
Instrument Approach Procedures	11
A. Non Precision Approach	11
B. Precision Approach	13
C. Missed Approach	14
D. Circling Approach	15
E. Landing from an Instrument Approach	16
Postflight Procedures	17
A. After Landing, Parking, and Securing	17

<b>Testing Roles, Responsibilities, and Outcomes</b>	<b>19</b>
Member Responsibilities	19
Instructor Responsibilities	19
Evaluator Responsibilities	19
ATC Requirements for Examinations	20
Possible Outcomes of the Examination	20
Satisfactory Performance	21
Unsatisfactory Performance	21
Discontinuance	22
Testing after Discontinuance or Unsatisfactory Performance	22
<b>Practical Examination Checklist (Member)</b>	<b>23</b>

# Areas of Operation

## I. Preflight Preparation

<b>Task</b>	<b>A. Pilot Qualifications and Aircraft Airworthiness</b>
<b>Objective</b>	To determine that the member exhibits satisfactory knowledge, risk management, and skills associated with IFR flight as a pilot and aircraft airworthiness
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.I.A.K1	General limitations of IFR flight
IR.I.A.K2	Equipment requirements for IFR flight
IR.I.A.K2a	a. Flying IFR with failed or inoperative equipment
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.I.A.R1	Flying unfamiliar airplanes, or operating with unfamiliar flight display systems, and avionics
IR.I.A.R2	Inoperative equipment discovered prior to or during flight.
<b>Skills</b>	The member demonstrates the ability to:
IR.I.A.S1	Apply general requirements to operate under Instrument Flight Rules (IFR) in a scenario given by the evaluator using the local rules of the check ride location.

<b>Task</b>	<b>B. Weather Information</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with obtaining, understanding, and applying weather information for a flight under IFR.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.I.B.K1	Local acceptable sources of weather data for flight planning purposes.
IR.I.B.K2	Weather products and resources required for preflight planning, current and forecast weather for departure, en route, and arrival phases of flight. (METAR and TAFF reports)
IR.I.B.K3	Meteorology applicable to the departure, en route, alternate, and destination for flights conducted under Instrument Flight Rules (IFR) to include expected climate and hazardous conditions such as:
IR.I.B.K3a	a. Atmospheric composition and stability
IR.I.B.K3b	b. Wind (e.g., crosswind, tailwind, windshear, etc.)
IR.I.B.K3c	c. Temperature

IR.I.B.K3d	d. Moisture/precipitation
IR.I.B.K3e	e. Weather system formation, including air masses and fronts
IR.I.B.K3f	f. Clouds
IR.I.B.K3g	g. Turbulence
IR.I.B.K3h	h. Thunderstorms and Microburst
IR.I.B.K3i	i. Icing and freezing level
IR.I.B.K3j	j. Fog/mist
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.I.B.R1	Factors involved in making the go/no-go and continue/divert decisions, to include:
IR.I.B.R1a	a. Circumstances that would make diversion prudent
IR.I.B.R1b	b. Hazardous weather conditions to include known or forecast icing or turbulence aloft
IR.I.B.R2	Limitations of:
IR.I.B.R2a	a. Aviation weather reports and forecasts
IR.I.B.R2b	b. Inflight weather equipment and resources (ATC)
<b>Skills</b>	The member demonstrates the ability to:
IR.I.B.S1	Use available aviation weather resources, obtain an adequate weather briefing, and correlate weather information to make a competent go/no-go decision
IR.I.B.S2	Analyze the implications in regards to IFR flight of at least three of the conditions listed in knowledge weather phenomena above, using weather conditions in a scenario provided by the evaluator
IR.I.B.S3	Determine whether an alternate airport is required, and, if required, whether the selected alternate airport meets regulatory requirements for the examination flight.

<b>Task</b>	<b>C. Cross Country Planning</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with planning an IFR cross-country and filing an IFR flight plan.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.I.C.K1	Route planning, including consideration of the available navigational facilities, special use airspaces, and alternate airports.
IR.I.C.K2	Altitude selection accounting for terrain and obstacles, IFR cruising altitudes, and effect of wind
IR.I.C.K3	Calculating:
IR.I.C.K3a	a. Estimated time of arrival to include conversion to universal coordinated time (UTC)
IR.I.C.K3b	b. Fuel requirements, to include reserve fuel

IR.I.C.K4	The elements of a VATSIM IFR flight plan and completing it.
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.I.C.R1	Pilot
IR.I.C.R2	Aircraft
IR.I.C.R3	Environment (e.g., weather, airports, airspace, terrain, obstacles)
IR.I.C.R4	Limitations of air traffic control (ATC) services
IR.I.C.R5	Improper Fuel Planning
<b>Skills</b>	The member demonstrates the ability to:
IR.I.C.S1	Prepare, present, and explain an IFR cross-country flight plan assigned by the evaluator including a risk analysis based on real time weather which includes calculating time en route and fuel considering factors such as power settings, operating altitude, wind, and fuel reserve requirements.
IR.I.C.S2	Create a navigation plan and file an IFR flight plan.
IR.I.C.S3	Interpret departure, arrival, en route, and approach procedures with reference to appropriate and current charts.
IR.I.C.S4	Apply pertinent information from appropriate or accepted aeronautical charts, Charts Supplement; NOTAMs relative to airport, runway and taxiway closures; and other flight publications.

## II. Preflight Procedures

<b>Task</b>	<b>A. Airplane Flight Instruments and Navigation Equipment</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with managing instruments appropriate for an IFR flight.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.II.A.K1	Operation of their airplane's applicable flight instrument system(s) including:
IR.II.A.K1a	a. Pitot-static instrument system: altimeter, airspeed indicator, vertical speed indicator
IR.II.A.K1b	b. Gyroscopic/electric/vacuum instrument system: attitude indicator, heading indicator, turn-and-slip indicator/turn coordinator

IR.II.A.K1c	c. Electrical systems, electronic flight instrument displays (PFD, MFD), and transponder (including available transponder modes)
IR.II.A.K1d	d. Magnetic compass
IR.II.A.K2	Operation of their airplane's applicable navigation system(s) including:
IR.II.A.K2a	a. VOR, DME, ILS, marker beacon receiver/indicators
IR.II.A.K2b	b. RNAV, GPS, and autopilot (if installed)
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.II.A.R1	Failure to monitor and manage automated systems.
<b>Skills</b>	The member demonstrates the ability to:
IR.II.A.S1	Understand, operate, and manage installed instruments and navigation equipment on virtual aircraft

### III. Air Traffic Control Clearances and Procedures

<b>Task</b>	<b>A. Compliance with Air Traffic Control Clearances</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with ATC clearances and procedures solely by reference to instruments.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.III.A.K1	Elements and procedures related to ATC clearances and pilot/controller responsibilities for departure, en route, and arrival phases of flight including clearance void times.
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.III.A.R1	Failure to fully understand an ATC clearance.
IR.III.A.R2	Inappropriate, incomplete, or incorrect ATC clearances
IR.III.A.R3	ATC clearance is inconsistent with airplane performance or navigation capability.
IR.III.A.R4	ATC clearance intended for other aircraft with a similar call sign.
<b>Skills</b>	The member demonstrates the ability to:
IR.III.A.S1	Correctly copy, read back, interpret, and comply with simulated or actual ATC clearances in a timely manner using standard FAA or ICAO phraseology.
IR.III.A.S2	Correctly set communication frequencies, navigation systems (identifying nav stations when appropriate), and transponder codes in compliance with the ATC clearance.

IR.III.A.S3	Use the current and appropriate paper or electronic navigation publications.
IR.III.A.S4	Intercept all courses, radials, and bearings appropriate to the procedure, route, or clearance in a timely manner.
IR.III.A.S5	Maintain the applicable airspeed $\pm 10$ knots, headings $\pm 10^\circ$ , altitude $\pm 100$ feet; and track a course, radial, or bearing within $\frac{3}{4}$ -scale deflection of the CDI.
IR.III.A.S6	Perform the appropriate airplane checklist items relative to the phase of flight.

<b>Task</b>	<b>B. Holding Procedures</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with holding procedures solely by reference to instruments.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.III.B.K1	Elements related to holding procedures, including reporting criteria, appropriate speeds, and recommended entry procedures for standard, nonstandard, published, and non-published holding patterns. (Direct, Teardrop, Parallel)
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.II.B.R1	Recalculating fuel reserves if assigned an unanticipated EFC time.
IR.III.B.R2	Scenarios and circumstances that could result in minimum fuel or the need to declare an emergency.
IR.III.B.R3	Scenarios that could lead to holding, including deteriorating weather at the planned destination or traffic metering.
IR.III.B.R4	Improper holding entry and or improper wind correction while holding
<b>Skills</b>	The member demonstrates the ability to:
IR.III.B.S1	Explain and use an entry procedure that ensures the airplane remains within the protected holding pattern airspace for a standard, nonstandard, published, <u>or</u> non-published holding pattern.
IR.III.B.S2	Change to the holding airspeed appropriate for the altitude or airplane when <u>3 minutes or less from, but prior to arriving at, the holding fix</u> and set appropriate power as needed for fuel conservation.
IR.III.B.S3	Recognize arrival at the holding fix and promptly initiate entry into the holding pattern. (Station Passage)
IR.III.B.S4	Maintain airspeed $\pm 10$ knots, altitude $\pm 100$ feet, selected headings within $\pm 10^\circ$ , and track a selected course, radial, or bearing within $\frac{3}{4}$ -scale deflection of the CDI.



IR.III.B.S5	Use proper wind correction procedures to maintain the desired pattern and to arrive over the fix as close as possible to a specified time and maintain pattern leg lengths when specified.
IR.III.B.S6	Use an MFD and other graphical navigation displays, if installed, to monitor position in relation to the desired flightpath during holding.
IR.III.B.S7	Comply with ATC reporting requirements and restrictions associated with the holding pattern.

#### IV. Flight by Reference to Instruments

<b>Task</b>	<b>A. Instrument Flight</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with performing basic instrument flight maneuvers solely by reference to instruments.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.IV.A.K1	Elements related to attitude instrument flying during straight-and-level flight, climbs, turns, and descents while conducting various instrument flight procedures.
IR.IV.A.K2	Interpretation, operation, and limitations of pitch, bank, and power instruments.
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.IV.A.R1	Flying unfamiliar airplanes, or operating with unfamiliar flight display systems and avionics.
<b>Skill</b>	The member demonstrates the ability to:
IR.IV.A.S1	Maintain altitude $\pm 100$ feet during level flight, selected headings $\pm 10^\circ$ , airspeed $\pm 10$ knots, and bank angles $\pm 10^\circ$ during turns.
IR.IV.A.S2	Use proper instrument cross-check and interpretation, and apply the appropriate pitch, bank, power, and trim corrections when applicable.

#### V. Navigation Systems

<b>Task</b>	<b>A. Intercepting and Tracking Navigational Systems and Arcs</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with intercepting

	and tracking navigation aids and arcs solely by reference to instruments.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.V.A.K1	Ground-based navigation (orientation, course determination, equipment, tests and regulations) including procedures for intercepting and tracking courses and arcs.
IR.V.A.K2	Satellite-based navigation (orientation, course determination, and equipment) including procedures for intercepting and tracking courses and arcs.
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.V.A.R1	Failure to manage automated navigation and autoflight systems.
IR.V.A.R2	Distractions, loss of situational awareness, or improper task management.
IR.V.A.R3	Limitations of the navigation system in use.
<b>Skill</b>	The member demonstrates the ability to:
IR.V.A.S1	Tune and correctly identify the navigation facility/program the navigation system and verify system accuracy as appropriate for the equipment installed in the airplane.
IR.V.A.S2	Determine airplane position relative to the navigational facility or waypoint.
IR.V.A.S3	Set and correctly orient to the course to be intercepted.
IR.V.A.S4	Intercept the specified course at appropriate angle, inbound to or outbound from a navigational facility or waypoint.
IR.V.A.S5	Maintain airspeed $\pm 10$ knots, altitude $\pm 100$ feet, and selected headings $\pm 10^\circ$ .
IR.V.A.S6	Apply proper corrections to maintain a course, allowing no more than $\frac{3}{4}$ -scale deflection of the CDI. If a DME arc is selected, maintain that arc $\pm 1$ nautical mile.
IR.V.A.S7	Use an MFD and other graphical navigation displays, if installed, to monitor position, track wind drift, and to maintain situational awareness.
IR.V.A.S8	Use the autopilot flight director to make appropriate course intercepts, if installed.

<b>Task</b>	<b>B. Departure, En Route, and Arrival Operations</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with IFR departure, en route, and arrival operations solely by reference to instruments.
<b>Knowledge</b>	The member demonstrates an understanding of:

IR.V.B.K1	Elements related to ATC routes, including departure procedures (DPs) and associated climb gradients; arrival procedures (STARs) and associated constraints.
IR.V.B.K2	Pilot/controller responsibilities, communication procedures, and ATC services available to pilots.
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.V.B.R1	Failure to communicate with ATC or follow published procedures
<b>Skill</b>	The member demonstrates the ability to:
IR.V.B.S1	Select, identify (as necessary) and use the appropriate communication and navigation facilities associated with the proposed flight.
IR.V.B.S2	Perform the appropriate airplane checklist items relative to the phase of flight.
IR.V.B.S3	Use the current or appropriate paper or electronic navigation publications.
IR.V.B.S4	Establish two-way communications with the proper controlling agency, comply in a timely manner with all ATC instructions and airspace restrictions, and exhibit adequate knowledge of communication failure procedures.
IR.V.B.S5	Intercept all courses, radials, and bearings appropriate to the procedure, route, or clearance in a timely manner.
IR.V.B.S6	Comply with all applicable chartered procedures.
IR.V.B.S7	Maintain airspeed $\pm 10$ knots, altitude $\pm 100$ feet, and selected headings $\pm 10^\circ$ , and apply proper correction to maintain a course allowing no more than $\frac{3}{4}$ -scale deflection of the CDI.
IR.V.B.S8	Update/interpret destination weather in flight.

## VI. Instrument Approach Procedures

<b>Task</b>	<b>A. Non Precision Approach</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with performing non precision approach procedures solely by reference to instruments.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.VI.A.K1	Procedures and limitations associated with a non precision approach, including the differences between Localizer Performance (LP) and Lateral Navigation (LNAV) approach guidance.

IR.VI.A.K2	Navigation system annunciations expected during an RNAV approach.
IR.VI.A.K3	Ground-based and satellite-based navigation systems used for a non precision approach.
IR.VI.A.K4	A stabilized approach, to include energy management concepts.
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.VI.A.R1	Failure to follow the correct approach procedure (e.g., descending too early, etc.).
IR.VI.A.R2	Selecting an incorrect navigation frequency.
IR.VI.A.R3	Failure to manage automated navigation and autoflight systems.
IR.VI.A.R4	Failure to ensure proper airplane configuration during an approach and missed approach.
IR.VI.A.R5	An unstable approach, including excessive descent rates.
IR.VI.A.R6	Deteriorating weather conditions on approach.
IR.VI.A.R7	Operating below the minimum descent altitude (MDA) or continuing a descent below decision altitude (DA) without proper visual references.
<b>Skill</b>	The member demonstrates the ability to:
IR.VI.A.S1	Accomplish the non precision instrument approaches selected by the evaluator.
IR.VI.A.S2	Establish two-way communications with ATC appropriate for the phase of flight or approach segment, and use proper communication phraseology.
IR.VI.A.S3	Select, tune, identify, and confirm the operational status of navigation equipment to be used for the approach.
IR.VI.A.S4	Comply with all clearances issued by ATC or the evaluator.
IR.VI.A.S5	Recognize if any flight instrumentation is inaccurate or inoperative, and take appropriate action.
IR.VI.A.S6	Advise ATC or the evaluator if unable to comply with a clearance
IR.VI.A.S7	Complete the appropriate checklist.
IR.VI.A.S8	Establish the appropriate airplane configuration and airspeed considering meteorological and operating conditions.
IR.VI.A.S9	Maintain altitude $\pm 100$ feet, selected heading $\pm 10^\circ$ , airspeed $\pm 10$ knots, and accurately track radials, courses, and bearings, prior to beginning the final approach segment.
IR.VI.A.S10	Adjust the published MDA and visibility criteria for the aircraft approach category, as appropriate, for factors that include NOTAMs, inoperative aircraft or navigation

	equipment, or inoperative visual aids associated with the landing environment, etc.
IR.VI.A.S11	Establish a stabilized descent to the appropriate altitude.
IR.VI.A.S12	For the final approach segment, maintain no more than a 1/2-scale deflection of the CDI, maintain airspeed $\pm 10$ knots, and altitude, if applicable, above MDA, +100/-0 feet, to the Visual Descent Point (VDP) or Missed Approach Point (MAP).
IR.VI.A.S13	Execute the missed approach procedure if the required visual references are not distinctly visible and identifiable at the appropriate point or altitude for the approach profile; or execute a normal landing from a straight-in or circling approach.
IR.VI.A.S14	Use an MFD and other graphical navigation displays, if installed, to monitor position, track wind drift, and to maintain situational awareness.

<b>Task</b>	<b>B. Precision Approach</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with performing precision approach procedures solely by reference to instruments.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.VI.B.K1	Procedures and limitations associated with a precision approach, including determining required descent rates and adjusting minimums in the case of inoperative equipment
IR.VI.B.K2	Navigation system displays, annunciations, and modes of operation.
IR.VI.B.K3	A stabilized approach, to include energy management concepts
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.VI.B.R1	FailVure to follow the correct approach procedure (e.g. descending below the glideslope, etc.).
IR.VI.B.R2	Selecting an incorrect navigation frequency
IR.VI.B.R3	Failure to manage automated navigation and autoflight systems.
IR.VI.B.R4	Failure to ensure proper airplane configuration during an approach and missed approach.
IR.VI.B.R5	An unstable approach, including excessive descent rates.
IR.VI.B.R6	Deteriorating weather conditions on approach.
IR.VI.B.R7	Continuing to descend below the Decision Altitude (DA)/Decision Height (DH) when the required visual references are not visible.

Skill	The member demonstrates the ability to:
IR.VI.B.S1	Accomplish the precision instrument approach(es) selected by the evaluator.
IR.VI.B.S2	Establish two-way communications with ATC appropriate for the phase of flight or approach segment, and use proper communication phraseology.
IR.VI.B.S3	Select, tune, identify, and confirm the operational status of navigation equipment to be used for the approach.
IR.VI.B.S4	Comply with all clearances issued by ATC or the evaluator.
IR.VI.B.S5	Recognize if any flight instrumentation is inaccurate or inoperative, and take appropriate action.
IR.VI.B.S6	Advise ATC or the evaluator if unable to comply with a clearance.
IR.VI.B.S7	Complete the appropriate checklist.
IR.VI.B.S8	Establish the appropriate airplane configuration and airspeed considering turbulence and windshear.
IR.VI.B.S9	Maintain altitude $\pm 100$ feet, selected heading $\pm 10^\circ$ , airspeed $\pm 10$ knots, and accurately track radials, courses, and bearings, prior to beginning the final approach segment.
IR.VI.B.S10	Adjust the published DA/DH and visibility criteria for the aircraft approach category, as appropriate, to account for NOTAMs, Inoperative airplane or navigation equipment, or inoperative visual aids associated with the landing environment.
IR.VI.B.S12	Establish a predetermined rate of descent at the point where vertical guidance begins, which approximates that required for the airplane to follow the vertical guidance.
IR.VI.B.S13	Maintain a stabilized final approach from the Final Approach Fix (FAF) to DA/DH allowing no more than 1/2-scale deflection of either the vertical or lateral guidance indications and maintain the desired airspeed $\pm 10$ knots.
IR.VI.B.S14	Immediately initiate the missed approach procedure when at the DA/DH, and the required visual references for the runway are not unmistakably visible and identifiable.
IR.VI.B.S15	Transition to a normal landing approach only when the airplane is in a position from which a descent to a landing on the runway can be made at a normal rate of descent using normal maneuvering.
IR.VI.B.S16	Maintain a stabilized visual flight path from the DA/DH to the runway aiming point where a normal landing may be accomplished within the touchdown zone.

IR.VI.B.S17	Use an MFD and other graphical navigation displays, if installed, to monitor position, track wind drift, and to maintain situational awareness.
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<b>Task</b>	<b>C. Missed Approach</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with performing a missed approach procedure solely by reference to instruments.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.VI.C.K1	Elements related to missed approach procedures and limitations associated with standard instrument approaches.
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.VI.C.R1	Failure to follow prescribed procedures.
IR.VI.C.R2	Holding, diverting, or electing to fly the approach again.
IR.VI.C.R3	Failure to ensure proper airplane configuration during an approach and missed approach.
IR.VI.C.R4	Factors that might lead to executing a missed approach procedure before the missed approach point or to a go-around below DA/MDA.
IR.VI.C.R5	Failure to manage automated navigation and autoflight systems.
<b>Skill</b>	The member demonstrates the ability to:
IR.VI.C.S1	Promptly initiate the missed approach procedure and report it to ATC.
IR.VI.C.S2	Apply the appropriate power setting for the flight condition and establish a pitch attitude necessary to obtain the desired climb performance.
IR.VI.C.S3	Configure the airplane to establish a positive rate of climb, and accelerate to the appropriate airspeed, $\pm 10$ knots.
IR.VI.C.S4	Follow the recommended checklist items appropriate to the missed approach/go-around procedure.
IR.VI.C.S5	Comply with the published or alternate missed approach procedure.
IR.VI.C.S6	Advise ATC or the evaluator if unable to comply with a clearance, restriction, or climb gradient.
IR.VI.C.S7	Maintain the heading, course, or bearing $\pm 10^\circ$ ; and altitude(s) $\pm 100$ feet during the missed approach procedure.
IR.VI.C.S8	Use an MFD and other graphical navigation displays, if installed, to monitor position and track to help navigate the missed approach.
IR.VI.C.S9	Request ATC clearance to attempt another approach, proceed to the alternate airport, holding fix, or other

	clearance limit, as appropriate, or as directed by the evaluator. member needs to show sort of proactive forward thinking instead of just holding and doing nothing else.
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<b>Task</b>	<b>D. Circling Approach</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with performing a circling approach procedure.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.VI.D.K1	Elements related to circling approach procedures and limitations including approach categories and related airspeed restrictions.
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.VI.D.R1	Failure to follow prescribed circling approach procedures.
IR.VI.D.R2	Executing a circling approach at night or with marginal visibility.
IR.VI.D.R3	Losing visual contact with an identifiable part of the airport.
IR.VI.D.R4	Failure to manage automated navigation and autoflight systems.
IR.VI.D.R5	Failure to maintain an appropriate altitude, airspeed, or distance while circling.
IR.VI.D.R6	Low altitude maneuvering including stall, spin, or CFIT.
IR.VI.D.R7	Executing an improper missed approach after the MAP while circling.
<b>Skill</b>	The member demonstrates the ability to:
IR.VI.D.S1	Comply with the circling approach procedure considering turbulence, windshear, and the maneuvering capability and approach category of the aircraft.
IR.VI.D.S2	Confirm the direction of traffic pattern and adhere to all restrictions and instructions issued by ATC or the evaluator.
IR.VI.D.S3	Establish the approach and landing configuration. Maintain a stabilized approach and a descent rate that ensures arrival at the MDA, or the preselected circling altitude above the MDA, prior to the missed approach point.
IR.VI.D.S4	Maintain airspeed $\pm 10$ knots, desired heading/track $\pm 10^\circ$ , and altitude $+100/-0$ feet until descending below the MDA or the preselected circling altitude above the MDA.
IR.VI.D.S5	Visually maneuver to a base or downwind leg appropriate for the landing runway and environmental conditions.
IR.VI.D.S6	If a missed approach occurs, turn in the appropriate direction using the correct procedure and appropriately configure the airplane.



IR.VI.D.S7	If landing, initiate a stabilized descent. Touch down on the first one-third of the selected runway without excessive maneuvering, without exceeding the normal operating limits of the airplane, and without exceeding 30° of bank.
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<b>Task</b>	<b>E. Landing from an Instrument Approach</b>
<b>Objective</b>	To determine the member exhibits satisfactory knowledge, risk management, and skills associated with performing the procedures for a landing from an instrument approach.
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.VI.E.K1	Elements related to the pilot's responsibilities, and the environmental, operational, and meteorological factors that affect landing from a straight-in or circling approach.
IR.VI.E.K2	Airport signs, markings and lighting, to include approach lighting systems.
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:
IR.VI.E.R1	Attempting to land from an unstable approach.
IR.VI.E.R2	Flying below the glidepath.
IR.VI.E.R3	Transitioning from instrument to visual references for landing.
<b>Skill</b>	The member demonstrates the ability to:
IR.VI.E.S1	Transition at the DA/DH, MDA, or visual descent point (VDP) to a visual flight condition, allowing for safe visual maneuvering and a normal landing.
IR.VI.E.S2	Adhere to all ATC or evaluator advisories, such as NOTAMs, windshear, wake turbulence, runway surface, braking conditions, and other operational considerations.
IR.VI.E.S3	Complete the appropriate landing checklist during approach.
IR.VI.E.S4	Maintain positive airplane control throughout the landing maneuver.

## VII. Postflight Procedures

<b>Task</b>	<b>A. After Landing, Parking, and Securing</b>
<b>Objective</b>	To determine that the member exhibits satisfactory knowledge, risk management, and skills associated with after landing, parking, and securing procedures
<b>Knowledge</b>	The member demonstrates an understanding of:
IR.VII.A.K1	Airplane shutdown and securing.
<b>Risk Management</b>	The member demonstrates the ability to identify, assess and mitigate risks, encompassing:

IR.VII.A.R1	Confirmation or expectation bias as related to taxi instructions.
<b>Skill</b>	The member demonstrates the ability to:
IR.VII.A.S1	Demonstrate runway incursion avoidance procedures.
IR.VII.A.S2	Park in an appropriate area.
IR.VII.A.S3	Complete the appropriate shutdown and securing checklist.
IR.VII.A.S4	Secure the airplane.

# Testing Roles, Responsibilities, and Outcomes

## Member Responsibilities

The member is responsible for mastering the established standards for knowledge, skill, and risk management elements in all Tasks appropriate to the certificate and rating sought. The member should use this MCS, its references, and the Practical Examination Checklist in this Appendix in preparation to take the practical examination.

## Instructor Responsibilities

The instructor is responsible for training the member to meet the established standards for knowledge, skill, and risk management elements in all Tasks appropriate to the certificate and rating sought. The instructor should use this MCS and its references as part of preparing the member to take the practical examination and, if necessary, in retraining the member to proficiency in all subject(s) missed on the knowledge examination.

## Evaluator Responsibilities

The evaluator who conducts the practical examination is responsible for determining that the member meets the established standards of aeronautical knowledge, skills (flight proficiency), and risk management for the Tasks in the appropriate MCS. This responsibility also includes verifying the experience requirements specified for a certificate or rating by having the prerequisite pilot rating.

The ATO must develop at a minimum one Plan of Action (POA), written in English, to conduct the practical examination, and it must include all of the required Areas of Operation and Tasks. The POA must include a scenario that evaluates as many of the required Areas of Operation and Tasks as possible. The evaluator has the discretion to modify the POA in order to accommodate unexpected situations as they arise. For example, the evaluator may elect to suspend and later resume a scenario in order to assess certain Tasks.

In the integrated MCS framework, the Areas of Operation contain Tasks that include “knowledge” elements (such as K1), “risk management” elements (such as R1), and “skill” elements (such as S1). Knowledge and risk management

elements are primarily evaluated during the written testing phase of the member certification process. The evaluator must assess the member on all skill elements for each Task included in each Area of Operation of the MCS, unless otherwise noted or an approved waiver is issued. The evaluator administering the practical examination has the discretion to combine Tasks/elements as appropriate to testing scenarios.

The required minimum elements to include in the POA, unless otherwise noted, from each applicable Task are as follows:

- at least one knowledge element (if specified in the task);
- all skill elements; and
- any Task elements in which the member was shown to be deficient on the knowledge examination.

Unless otherwise noted in the Task, the evaluator must examine each item in the skills section by asking the member to perform each one.

## **ATC Requirements for Examinations**

ATC instructions and communications may be conducted either using a live network controller OR the examiner may act in place of ATC if not online or a live controller is desired not to be used. ATOs are asked to provide examiners with an ATC script to accompany the checkride's plan of action that uses proper ATC phraseology for the airspace the checkride is being conducted in. ATC transcribed instructions MAY be provided if the examination is not done in a live capacity.

## **Possible Outcomes of the Examination**

There are three possible outcomes of the practical examination: (1) Pass (satisfactory), (2) Fail (unsatisfactory), or (3) Discontinuance.

If the evaluator determines that a Task is incomplete, or the outcome is uncertain, the evaluator must require the member to repeat that Task, or portions of that Task. This provision does not mean that instruction, practice, or the repetition of an unsatisfactory Task is permitted during the practical examination.

If the evaluator determines the member's skills and abilities are in doubt, the outcome is unsatisfactory and the evaluator must issue a Notice of Disapproval.

## Satisfactory Performance

Satisfactory performance requires that the member:

- demonstrate the Tasks specified in the Areas of Operation for the certificate or rating sought within the established standards;
- demonstrate mastery of the aircraft by performing each Task successfully;
- demonstrate proficiency and competency in accordance with the approved standards;
- demonstrate sound judgment and exercise aeronautical decision-making/risk management; and
- demonstrate single-pilot competence and management in an airplane that is certificated for single-pilot operations.

Satisfactory performance will result in the issuance of the proper pilot rating.

## Unsatisfactory Performance

Typical areas of unsatisfactory performance and grounds for disqualification include:

- Any action or lack of action by the member that requires corrective intervention by the evaluator to maintain safe flight.
- Failure to use proper and effective visual scanning techniques to clear the area before and while performing maneuvers.
- Consistently exceeding tolerances stated in the skill elements of the Task.
- Failure to take prompt and reasonable corrective action when tolerances are exceeded.
- Failure to exercise risk management.

**Note:** Examiners are encouraged to provide members with a few opportunities to reattempt tasks found to be unsatisfactory. No more than three total attempts to demonstrate proficiency of any task during the checkride may be given.

If, in the judgment of the evaluator, the member does not meet the standards for any Task, the member fails the Task. The examination is unsatisfactory, and the evaluator issues the check ride unsatisfactory. The evaluator lists the Task(s) in which the member did not meet the standard, any Task(s) not tested. The evaluator will complete this report using the applicable PTD approved pilot rating examination form for that specific pilot rating.

The evaluator may choose to end a practical evaluation early if they feel the

member is not at all prepared or whose skills are clearly not at the standards to pass the exam. However, it is encouraged that examiners allow the checkride to continue with the interest of examining as many tasks as possible. If an examiner determines a checkride unsatisfactory, examiners should not express this result till the debrief portion of the checkride.

### **Discontinuance**

When it is necessary to discontinue a practical examination for reasons other than unsatisfactory performance (e.g., computer failure, software issues, real world conflicts, etc.), the evaluator must return all examination paperwork to the member. The evaluator must initial/sign, date, and issue a Discontinuance that lists those Areas of Operation the member successfully completed. The evaluator should advise the member to present the Discontinuance to the next evaluator when the practical examination resumes in order to receive credit for the items successfully completed. The Discontinuance should also be filed into the member's examination records file. The member has 14 calendar days to finish the remainder of the discontinued examination with an approved examiner. If the discontinued exam is not completed in this time window, the examination must be completely redone.

### **Testing after Discontinuance or Unsatisfactory Performance**

To avoid having to retake the entire practical examination, a member has 90 days from the date of a first failure or Discontinuance to pass the practical examination. The evaluator's plan of action to complete the examination must include any unsatisfactory or untested Area(s) of Operation and Task(s) as indicated on the current Unsatisfactory or Letter of Discontinuance. While a member may receive credit for any Task(s) successfully completed within a failed or partially tested Area of Operation, the evaluator has discretion to reevaluate any Task(s).

## Practical Examination Checklist (Member)

### Appointment with Evaluator

Evaluator's Name: \_\_\_\_\_

Location: \_\_\_\_\_

Date/Time: \_\_\_\_\_

### Acceptable Aircraft

- Approved ATO course syllabus practical examination aircraft

### Personal Equipment

- ATO required exam monitoring software installed
- Completed required Flight Planning/Flight Log (printed or electronic)
- Stable and working simulator settings to conduct practical exam in
- Approved stable and working simulator aircraft to conduct the practical exam in
- Approved flight planning for assigned cross country and given weather conditions by the examiner or examining authority
- ATO Approved aeronautical charts to be used to complete the checkride

### Personal Records

- Successfully Completed Written Knowledge Examination