



Instrument, Airplane Syllabus

Part 61
Federal Aviation Regulations

Phase one – Attitude Flying

All flights are dual Instruction

Lesson Number: 1

Introduce

Attitude Instrument Flying

Learning a proper scan technique.

Straight and level

Turns

Climbs and descents

Lesson complete when student scan the six flight instruments, while maintaining altitudes $\pm 100'$ Headings $\pm 10^\circ$.

Lesson complete _____ Date

Lesson Number: 2

Attitude Instrument Flying

Review:

Straight and level

Turns

Climbs and descents

Introduce

Flight at various airspeeds.

Slow flight ($1.2 V_{so}$)

Stalls

Steep turns

30° bank 360

Lesson complete when student scan the six flight instruments, while maintaining altitudes $\pm 100'$ Headings $\pm 10^\circ$.

Lesson complete _____ Date

Lesson Number: 3

Attitude Instrument Flying

Review:

Slow flight ($1.2 V_{so}$)

Stalls

30° bank 360

Introduce

Vertical "S" Straight and turning

Lesson complete when student scan the six flight instruments, while maintaining altitudes $\pm 100'$ Headings $\pm 10^\circ$.

Lesson complete _____ Date

Lesson Number: 4

Attitude Instrument Flying

Review:

Vertical "S" Straight and turning

Introduce

Partial panel.

Simulate vacuum failure

Straight and level

Climbs and descents

Timed Turns

Simulate Electrical failure

Straight and level

Climbs and descents

Timed Turns

Recovery from unusual attitudes

Full panel

Partial panel

Lesson complete when student scan the six flight instruments, while maintaining altitudes $\pm 100'$ Headings $\pm 10^\circ$.

Lesson complete _____ Date

Phase Two – Navigation

All flights are dual Instruction

Lesson Number 1

Introduce

Intercepting and tracking VOR

Intercept and track “to” station

Intercept and track “from” station

Tracking during station passage

Communications

Student will start “reading back” headings and altitudes from instructor

Lesson complete when student maintains altitudes $\pm 100'$ Headings $\pm 10^\circ$, and while keeping OBS no more than $\frac{1}{2}$ scale deflection.

Lesson complete _____ Date

Lesson Number 2

Practice VOR Track and intercept

Introduce

VOR Holding

Direct entry

Parallel outbound entry

Teardrop entry

Communications

Student will “reading back” headings and altitudes from instructor

Lesson complete when student maintains altitudes $\pm 100'$ Headings $\pm 10^\circ$, and while keeping OBS no more than $\frac{1}{2}$ scale deflection.

Lesson complete _____ Date

Lesson Number 3
Review VOR holding

Introduce

Homing to the station

Intercepting and tracking NDB/ADF

Intercept and track "to" station

Intercept and track "from" station

Tracking during station passage

Communications

Student will "reading back" headings and altitudes from instructor

Lesson complete when student maintains altitudes $\pm 100'$ Headings $\pm 10^\circ$,
and while keeping ADF needle within 10° of desired course.

Lesson complete _____ Date

Lesson Number 4

Review

Intercepting and tracking NDB/ADF

Introduce

NDB Holding

- Direct entry

- Parallel outbound entry

- Teardrop entry

Communications

- Student will “reading back” headings and altitudes from instructor

Lesson complete when student maintains altitudes $\pm 100'$ Headings $\pm 10^\circ$, and while keeping ADF needle within 10° of desired course.

Lesson complete _____ Date

Lesson Number 5

Review

NDB Holding

Introduce

Localizer Tracking

Communications

Student will “reading back” headings and altitudes from instructor
Lesson complete when student maintains altitudes $\pm 100'$ Headings $\pm 10^\circ$,
and while keeping Localizer needle within $\frac{1}{2}$ scale.

Lesson complete _____ Date

Lesson Number 6

Review

Localizer Tracking

Introduce

Localizer back course tracking

Holding on localizer

Holding at intersection

 Standard turns in hold

 Non-standard turns in hold

Communications

 Student will “reading back” headings and altitudes from instructor

Lesson complete when student maintains altitudes $\pm 100'$ Headings $\pm 10^\circ$, and while keeping Localizer needle within $\frac{1}{2}$ scale.

Lesson complete _____ Date

Lesson Number 7

VOR 16R Approach PAE

File IFR Flight Plan for multiple approaches PAE

Full approach

Radar vectors to final

Missed approach procedures

VOR Hold as published on PAE 16R VOR approach

Communications

Student will “reading back” IFR clearance and start communicating with enroute ATC

Lesson complete when student maintains altitudes + 100' – 0' Headings \pm 10°, and VOR needle within $\frac{1}{2}$ scale.

Lesson complete _____ Date

Lesson number 8

NDB 16R Approach PAE

File IFR Flight Plan for multiple approaches PAE

Full approach

Radar vectors to final

Missed approach procedures

NDB hold as published on PAE 16R NDB approach

Communications

Student will “reading back” IFR clearance and start communicating with enroute ATC

Lesson complete when student maintains altitudes $\pm 100'$ – $0'$ Headings $\pm 10^\circ$, and ADF needle within 10° of course.

Lesson complete _____ Date

Lesson number 9

Localizer 34 approach AWO

File IFR Flight Plan for multiple approaches AWO

Full approach

Radar vectors to final

Missed approach procedures

Hold as published on AWO Localizer 34 approach

Communications

Student will “reading back” IFR clearance and start communicating with enroute ATC

Lesson complete when student maintains altitudes + 100' – 0' Headings \pm 10°, and Localizer needle within $\frac{1}{2}$ scale.

Lesson complete _____ Date

Lesson number 10

ILS Approach 16R PAE

File IFR Flight Plan for multiple approaches PAE

Full approach

Radar vectors to final

Missed approach procedures

Partial Panel Approach

Communications

Student will “reading back” IFR clearance and start communicating with enroute ATC

Lesson complete when student maintains altitudes $\pm 100'$ – $0'$ Headings $\pm 10^\circ$, and Localizer and Glide Slope needles within $\frac{1}{2}$ scale.

Lesson complete _____ Date

Phase Three – Cross Country

All flights are dual Instruction

Lesson Number 1

Introduce

IFR cross country to BLI and return. Route to be: PAE V23 HUH / BLI.
Return BLI V23 PAE

Student will file two IFR flight plans; get, copy, and read back clearance. Do IFR aircraft preflight and run-up. Tune, identify and set all nav and com radios for departure.

Student will take off, follow SID to enroute segment, fly route, arrival procedure, and ILS approach to full stop at BLI.

At BLI, Student will get, copy, and read back clearance. Do IFR aircraft preflight and run-up. Tune, identify and set all nav and com radios for departure.

Student will take off, follow SID to enroute segment, fly route, arrival procedure, and VOR approach to full stop at PAE.

Student will do communications as able.

Lesson complete when student maintains altitudes + 100' – 0' Headings $\pm 10^\circ$, and Localizer and Glide Slope needles within $\frac{1}{2}$ scale. VOR needles within 2 dots of center for enroute and approach, and ADF needle within 5° of course.

Lesson complete _____ Date

Lesson Number 2

Introduce

IFR cross country to CLM and return. Route to be: PAE V287 LOFAL, V4 JAWBN, V4 ELWHA CLM. Return CLM VIA SID to intercept V4. Then reverse to PAE, or if given RADAR Vectors to PA.

Student will file two IFR flight plans; get, copy, and read back clearance. Do IFR aircraft preflight and run-up. Tune, identify and set all nav and com radios for departure.

Student will take off, follow SID to enroute segment, fly route, arrival procedure, and ILS approach to full stop at CLM.

At CLM, Student will get, copy, and read back clearance. Do IFR aircraft preflight and run-up. Tune, identify and set all nav and com radios for departure.

Student will take off, follow SID to enroute segment, fly route, arrival procedure, and NDB approach to full stop at PAE.

Student will do communications as able.

Lesson complete when student maintains altitudes + 100' – 0' Headings \pm 10°, and Localizer and Glide Slope needles within $\frac{1}{2}$ scale. VOR needles within 2 dots of center for enroute and approach, and ADF needle within 5° of course.

Lesson complete _____ Date

Lesson Number 3

Introduce

IFR cross country to PWT, TIW and return.

Route to be:

Chosen by student

Student will file three IFR flight plans; get, copy, and read back clearance. Do IFR aircraft preflight and run-up. Tune, identify and set all nav and com radios for departure.

Student will take off, follow SID to enroute segment, fly route, arrival procedure, and ILS approach to full stop at PWT.

At PWT, Student will get, copy, and read back clearance. Do IFR aircraft preflight and run-up. Tune, identify and set all nav and com radios for departure.

Student will take off, follow SID to enroute segment, fly route, arrival procedure, and ILS approach to full stop at TIW.

Student will take off, follow SID to enroute segment, fly route, arrival procedure, and ILS approach to full stop at PAE.

Student should be able to manage most communications by now with minimal assistance from instructor.

Lesson complete when student maintains altitudes + 100' – 0' Headings $\pm 10^\circ$, and Localizer and Glide Slope needles within $\frac{1}{2}$ scale. VOR needles within 2 dots of center for enroute and approach, and ADF needle within 5° of course.

Lesson complete _____ Date

Lesson Number 4

Introduce

IFR cross country to SHN and return. Route to be chosen by student.

Student will file two IFR flight plans; get, copy, and read back clearance. Do IFR aircraft preflight and run-up. Tune, identify and set all nav and com radios for departure.

Student will take off, follow SID to enroute segment, fly route, arrival procedure, and NDB approach to full stop at SHN.

At SHN, Student will get, copy, and read back clearance. Do IFR aircraft preflight and run-up. Tune, identify and set all nav and com radios for departure.

Student will take off, follow SID to enroute segment, fly route, arrival procedure, and approach of student's choice to full stop at PAE.

Student should be able to manage most communications by now with minimal assistance from instructor.

Lesson complete when student maintains altitudes + 100' – 0' Headings $\pm 10^\circ$, and Localizer and Glide Slope needles within $\frac{1}{2}$ scale. VOR needles within 2 dots of center for enroute and approach, and ADF needle within 5° of course.

Lesson complete _____ Date

Lesson Number 5

Introduce

IFR long cross country.

Route to be:

Leg one – PAE – HQM. PAE P2, V287 APREE, V287 CARRO, V27 HQM, HQM.
Approach to be VOR.

Leg two – HQM – AST. HQM, SID, V27 AST. Approach to be ILS.

Leg three – AST – PAE. AST SID, V187 OLM, V287 PAE. Approach to be NDB.

Student will file three IFR flight plans; get, copy, and read back clearance. Do IFR aircraft preflight and run-up. Tune, identify and set all nav and com radios for departure.

Student will take off, follow all SIDs to enroute segments, fly route, arrival procedure, and approaches to full stop at all airports.

Flight planning will be sufficient to know where you are at all times. Student will follow plan to arrive at checkpoints ± 5 minutes of ETA, and modify planning as appropriate to arrive at the next checkpoint ± 3 minutes.

Student should be able to manage most communications by now with minimal assistance from instructor.

Lesson complete when student maintains altitudes $+ 100'$ – $0'$ Headings $\pm 10^\circ$, and Localizer and Glide Slope needles within $\frac{1}{2}$ scale. VOR needles within 2 dots of center for enroute and approach, and ADF needle within 5° of course.

Lesson complete _____ Date

Phase four – Preparation

All flights are dual Instruction
and must be within 60 days of checkride

Lesson Number: 1

This lesson will simulate the FAA checkride as close as possible to enable the student to experience atmosphere in the checkride environment.

Completion Standards: Instrument Rating Practical Test Standards.

Lesson Number: 2

This is the final prep flight. The student must have the checkride scheduled and written knowledge test passed prior to this flight.

The oral will cover all items found deficient on the applicant's knowledge test, in addition to any items the student had difficulty on during lesson 1.

The flight check will cover all items on the Instrument Rating Practical Test Standards book, with emphasis on those items the student had difficulty on during lesson 1.

Completion Standards: Instrument Rating Practical Test Standards.

At the completion of this flight the instructor will sign off the student's log book and FAA Form 8710-1 (IACRA) application for certificate or rating.

Lesson complete _____ Date

Phase	Lesson	Time
1 – Attitude Instrument Flying		
	1	2.0
	2	2.0
	3	2.0
	4	2.0
Total Phase 1		8.0
2 – Navigation		
	1	1.5
	2	1.5
	3	1.5
	4	1.5
	5	1.5
	6	1.5
	7	1.5
	8	1.5
	9	1.5
	10	1.5
Total Phase 2		15.0
3 – Cross Country		
	1 PAE-BLI-PAE	2.5
	2 PAE-CLM-PAE	2.5
	3 PAE-PWT-TIW-PAE	2.5
	4 PAE – SHN – PAE	2.0
	5 PAE – HQM – AST – PAE	4.5
Total Phase 3		14.5
4 – Preparation		
	1 – Practice Checkride including oral	1.5
	2 – Practice Checkride including oral	1.5
Total Phase 4		3.0
Total course		40.0

Lesson complete _____ Date