



**HC 02 P**

ZVR 094042873 - AT.ATO.154

**Syllabus Praxis**  
**PPL(A)**

Version 01.06.2016

## **Einleitung**

Dieser Syllabus soll Vortragende und Fluglehrer bei der Ausübung ihrer Unterrichtstätigkeit unterstützen.

Darüber hinaus ist es jedoch unerlässlich auch die relevanten Inhalte des Training Manuals, Operational Manuals und Organisation Management Manuals zu kennen.

Ebenfalls haben Vortragende und Fluglehrer alle Informationen, welche von der ATO herausgegeben werden, sowie die jeweils geltenden administrativen und organisatorischen Vorgaben zu beachten.

Die persönliche Verantwortung für einen optimalen Ausbildungsablauf und die Einhaltung aller Sicherheitsbestimmungen, sowie des EASA Reglements wird durch den Syllabus aber nicht ersetzt.

Der Syllabus ist auch für Flugschülerinnen und Flugschüler als Ergänzung zu den anderen Lernunterlagen gedacht.

Er bietet einen Überblick über die Lerninhalte und kann so das Lernen von Theorie und Praxis begleitend unterstützen.

## **Referenz**

AMC1 FCL.210.A

## Flugübungen | Übungsabschnitte

Abschnitt I ist vor der ersten Flugübung eingehend zu besprechen und, soweit zutreffend, korrekt durchzuführen und in Folge vor jedem Flug so lange zu wiederholen bis der Schüler alle Punkte auch ohne Hilfe des Fluglehrers versteht.

I	Familiarisation with the aeroplane	PPL(A)
	(A) characteristics of the aeroplane; (B) cockpit layout; (C) systems; (D) checklists, drills and controls.	X

Abschnitt II ist vor der ersten Flugübung eingehend zu besprechen und in Folge vor jedem Flug zu wiederholen, sodass alle Tätigkeiten bis zum ersten Alleinflug auch ohne Hilfe des Fluglehrers im Ernstfall automatisiert beherrscht werden.

II	Emergency drills	PPL(A)
	(A) action if fire on the ground and in the air; (B) engine cabin and electrical system fire; (C) systems failure; (D) escape drills, location and use of emergency equipment and exits.	X

Abschnitt III ist vor der ersten Flugübung eingehend zu besprechen und, soweit zutreffend, korrekt durchzuführen und in Folge vor und nach jedem Flug zu wiederholen, sodass alle Tätigkeiten bis zum ersten Alleinflug auch ohne Hilfe des Fluglehrers beherrscht werden.

III	Preparation for and action after flight	PPL(A)
	(A) flight authorisation and aeroplane acceptance; (B) serviceability documents; (C) equipment required, maps, etc.; (D) external checks; (E) internal checks; (F) harness, seat or rudder panel adjustments; (G) starting and warm-up checks; (H) power checks; (I) running down system checks and switching off the engine; (J) parking, security and picketing (for example tie down); (K) completion of authorisation sheet and serviceability documents.  <b>Eingehende Unterweisung zur Betankung</b> 1. Sicherheitsvorschriften 2. Betankung durch Tankdienst 3. Betankung durch den Piloten 4. Besprechung aller Einrichtungen am Flugzeug - Tanks, Tankverschlüsse etc.	X

<b>01</b>	<b>Air experience: flight exercise</b>	<b>Ausbildungsphase 01</b>	<b>PPL(A)</b>
	<b>Air experience: flight exercise</b>		X
<b>02</b>	<b>Effects of controls</b>	<b>Ausbildungsphase 01</b>	<b>PPL(A)</b>
	(A) primary effects when laterally level and when banked; (B) further effects of aileron and rudder; (C) effects of: (a) air speed; (b) slipstream; (c) power; (d) trimming controls; (e) flaps; (f) other controls, as applicable. (D) operation of: (a) mixture control; (b) carburettor heat; (c) cabin heating or ventilation.		X
<b>03</b>	<b>Taxiing</b>	<b>Ausbildungsphase 01</b>	<b>PPL(A)</b>
	(A) pre-taxi checks; (B) starting, control of speed and stopping; (C) engine handling; (D) control of direction and turning; (E) turning in confined spaces; (F) parking area procedure and precautions; (G) effects of wind and use of flying controls; (H) effects of ground surface; (I) freedom of rudder movement; (J) marshalling signals; (K) instrument checks; (L) air traffic control procedures.		X
<b>04</b>	<b>Emergencies</b>	<b>Ausbildungsphase 01</b>	<b>PPL(A)</b>
	brake and steering failure.		X
<b>05</b>	<b>Straight and level</b>	<b>Ausbildungsphase 01</b>	<b>PPL(A)</b>
	(A) at normal cruising power, attaining and maintaining straight and level flight; (B) flight at critically high air speeds; (C) demonstration of inherent stability; (D) control in pitch, including use of trim; (E) lateral level, direction and balance and trim; (F) at selected air speeds (use of power); (G) during speed and configuration changes; (H) use of instruments for precision.		X

<b>06</b>	<b>Climbing</b>	<b>Ausbildungsphase 01</b>	<b>PPL(A)</b>
	(A) entry, maintaining the normal and max rate climb and levelling off; (B) levelling off at selected altitudes; (C) en-route climb (cruise climb); (D) climbing with flap down; (E) recovery to normal climb; (F) maximum angle of climb; (G) use of instruments for precision.		X
<b>07</b>	<b>Descending</b>	<b>Ausbildungsphase 01</b>	<b>PPL(A)</b>
	(A) entry, maintaining and levelling off; (B) levelling off at selected altitudes; (C) glide, powered and cruise descent (including effect of power and air speed); (D) side slipping (on suitable types); (E) use of instruments for precision flight.		X
<b>08</b>	<b>Turning</b>	<b>Ausbildungsphase 01</b>	<b>PPL(A)</b>
	(A) entry and maintaining medium level turns; (B) resuming straight flight; (C) faults in the turn (for example in correct pitch, bank and balance); (D) climbing turns; (E) descending turns; (F) faults in the turns (slipping and skidding on suitable types); (G) turns onto selected headings, use of gyro heading indicator and compass; (H) use of instruments for precision.		X
<b>09</b>	<b>Slow flight</b>	<b>Ausbildungsphase 01</b>	<b>PPL(A)</b>
	Note: the objective is to improve the student's ability to recognise inadvertent flight at critically low speeds and provide practice in maintaining the aeroplane in balance while returning to normal air speed. (A) safety checks; (B) introduction to slow flight; (C) controlled flight down to critically slow air speed; (D) application of full power with correct attitude and balance to achieve normal climb speed.		X
<b>10</b>	<b>Stalling</b>	<b>Ausbildungsphase 01</b>	<b>PPL(A)</b>
	(A) safety checks; (B) symptoms; (C) recognition; (D) clean stall and recovery without power and with power; (E) recovery when a wing drops; (F) approach to stall in the approach and in the landing configurations, with and without power and recovery at the incipient stage.		X

11	Spin avoidance	Ausbildungsphase 01	PPL(A)
	(A) safety checks; (B) stalling and recovery at the incipient spin stage (stall with excessive wing drop, about 45 °); (C) instructor induced distractions during the stall.  Note 1: at least two hours of stall awareness and spin avoidance flight training should be completed during the course. Note 2: consideration of manoeuvre limitations and the need to refer to the aeroplane manual and mass and balance calculations.		X
12	Take-off and climb to downwind position:	Ausbildungsphase 02	PPL(A)
	(A) pre-take-off checks; (B) into wind take-off; (C) safeguarding the nose wheel; (D) crosswind take-off; (E) drills during and after take-off; (F) short take-off and soft field procedure/techniques including performance calculations; (G) noise abatement procedures.		X
13	Circuit, approach and landing	Ausbildungsphase 02	PPL(A)
	(A) circuit procedures, downwind and base leg; (B) powered approach and landing; (C) safeguarding the nose wheel; (D) effect of wind on approach and touchdown speeds and use of flaps; (E) crosswind approach and landing; (F) glide approach and landing; (G) short landing and soft field procedures or techniques; (H) flapless approach and landing; (I) wheel landing (tail wheel aeroplanes); (J) missed approach and go-around; (K) noise abatement procedures.		X
14	Emergencies	Ausbildungsphase 02	PPL(A)
	(A) abandoned take-off; (B) engine failure after take-off; (C) mislanding and go-around; (D) missed approach.  Note: in the interests of safety it will be necessary for pilots trained on nose wheel aeroplanes to undergo dual conversion training before flying tail wheel aeroplanes, and vice-versa.		X
15	First solo	Ausbildungsphase 03	PPL(A)
	(A) instructor's briefing, observation of flight and de-briefing;  <i>Note: during flights immediately following the solo circuit consolidation the following should be revised:</i>  (B) procedures for leaving and rejoining the circuit; (C) the local area, restrictions, map reading; (D) use of radio aids for homing; (E) turns using magnetic compass, compass errors.		X

<b>16</b>	<b>Advanced turning</b>	<b>Ausbildungsphase 04</b>	<b>PPL(A)</b>
	(A) steep turns (45 °), level and descending; (B) stalling in the turn and recovery; (C) recoveries from unusual attitudes, including spiral dives.		X
<b>17</b>	<b>Forced landing without power</b>	<b>Ausbildungsphase 04</b>	<b>PPL(A)</b>
	(A) forced landing procedure; (B) choice of landing area, provision for change of plan; (C) gliding distance; (D) descent plan; (E) key positions; (F) engine cooling; (G) engine failure checks; (H) use of radio; (I) base leg; (J) final approach; (K) landing; (L) actions after landing.		X
<b>18</b>	<b>Precautionary landing</b>	<b>Ausbildungsphase 04</b>	<b>PPL(A)</b>
	(A) full procedure away from aerodrome to break-off height; (B) occasions necessitating; (C) in-flight conditions; (D) landing area selection: (a) normal aerodrome; (b) disused aerodrome; (c) ordinary field. (E) circuit and approach; (F) actions after landing.		X

19	Navigation	Ausbildungsphase 05	PPL(A)
	<p><b>flight planning</b></p> <ul style="list-style-type: none"> <li>(a) weather forecast and actuals;</li> <li>(b) map selection and preparation:               <ul style="list-style-type: none"> <li>(1) choice of route;</li> <li>(2) controlled airspace;</li> <li>(3) danger, prohibited and restricted areas;</li> <li>(4) safety altitudes.</li> </ul> </li> <li>(c) calculations:               <ul style="list-style-type: none"> <li>(1) magnetic heading(s) and time(s) en-route;</li> <li>(2) fuel consumption;</li> <li>(3) mass and balance;</li> <li>(4) mass and performance.</li> </ul> </li> <li>(d) flight information:               <ul style="list-style-type: none"> <li>(1) NOTAMs etc.;</li> <li>(2) radio frequencies;</li> <li>(3) selection of alternate aerodromes.</li> </ul> </li> <li>(e) aeroplane documentation;</li> <li>(f) notification of the flight:               <ul style="list-style-type: none"> <li>(1) pre-flight administrative procedures;</li> <li>(2) flight plan form.</li> </ul> </li> </ul> <p><b>departure</b></p> <ul style="list-style-type: none"> <li>(a) organisation of cockpit workload;</li> <li>(b) departure procedures:               <ul style="list-style-type: none"> <li>(1) altimeter settings;</li> <li>(2) ATC liaison in controlled or regulated airspace;</li> <li>(3) setting heading procedure;</li> <li>(4) noting of ETAs.</li> </ul> </li> <li>(c) maintenance of altitude and heading;</li> <li>(d) revisions of ETA and heading;</li> <li>(e) log keeping;</li> <li>(f) use of radio;</li> <li>(g) use of nav aids;</li> <li>(h) minimum weather conditions for continuation of flight;</li> <li>(i) in-flight decisions;</li> <li>(j) transiting controlled or regulated airspace;</li> <li>(k) diversion procedures;</li> <li>(l) uncertainty of position procedure;</li> <li>(m) lost procedure.</li> </ul> <p><b>arrival and aerodrome joining procedure</b></p> <ul style="list-style-type: none"> <li>(a) ATC liaison in controlled or regulated airspace;</li> <li>(b) altimeter setting;</li> <li>(c) entering the traffic pattern;</li> <li>(d) circuit procedures;</li> <li>(e) parking;</li> <li>(f) security of aeroplane;</li> <li>(g) refuelling;</li> <li>(h) closing of flight plan, if appropriate;</li> <li>(i) post-flight administrative procedures.</li> </ul>		X



20	Navigation problems at lower levels and in reduced visibility	Ausbildungsphase 05	PPL(A)
	(A) actions before descending; (B) hazards (for example obstacles and terrain); (C) difficulties of map reading; (D) effects of wind and turbulence; (E) vertical situational awareness (avoidance of controlled flight into terrain); (F) avoidance of noise sensitive areas; (G) joining the circuit; (H) bad weather circuit and landing.		X
21	Radio navigation	Ausbildungsphase 05	PPL(A)
	<p><b>use of GNSS</b></p> <ul style="list-style-type: none"> <li>(a) selection of waypoints;</li> <li>(b) to or from indications and orientation;</li> <li>(c) error messages.</li> </ul> <p><b>use of VHF omni range</b></p> <ul style="list-style-type: none"> <li>(a) availability, AIP and frequencies;</li> <li>(b) selection and identification;</li> <li>(c) OBS;</li> <li>(d) to or from indications and orientation;</li> <li>(e) CDI;</li> <li>(f) determination of radial;</li> <li>(g) intercepting and maintaining a radial;</li> <li>(h) VOR passage;</li> <li>(i) obtaining a fix from two VORs.</li> </ul> <p><b>use of ADF equipment: NDBs</b></p> <ul style="list-style-type: none"> <li>(a) availability, AIP and frequencies;</li> <li>(b) selection and identification;</li> <li>(c) orientation relative to the beacon;</li> <li>(d) homing.</li> </ul> <p><b>use of VHF/DF</b></p> <ul style="list-style-type: none"> <li>(a) availability, AIP, frequencies;</li> <li>(b) R/T procedures and ATC liaison;</li> <li>(c) obtaining a QDM and homing.</li> </ul> <p><b>use of en-route or terminal radar</b></p> <ul style="list-style-type: none"> <li>(a) availability and AIP;</li> <li>(b) procedures and ATC liaison;</li> <li>(c) pilot's responsibilities;</li> <li>(d) secondary surveillance radar:               <ul style="list-style-type: none"> <li>(1) transponders;</li> <li>(2) code selection;</li> <li>(3) interrogation and reply.</li> </ul> </li> </ul> <p><b>use of DME</b></p> <ul style="list-style-type: none"> <li>(a) station selection and identification;</li> <li>(b) modes of operation: distance, groundspeed and time to run.</li> </ul>		X

22	Basic instrument flight	Ausbildungsphase 05	PPL(A)
	(A) physiological sensations; (B) instrument appreciation; attitude instrument flight; (C) instrument limitations; (D) basic manoeuvres: (a) straight and level at various air speeds and configurations; (b) climbing and descending; (c) standard rate turns, climbing and descending, onto selected headings; (d) recoveries from climbing and descending turns.		X

## Prüfungsinhalte der praktischen Prüfung

<b>SECTION 1 PRE-FLIGHT OPERATIONS AND DEPARTURE</b>	
Use of checklist, airmanship, control of aeroplane by external visual reference, anti/de-icing procedures, etc. apply in all sections.	
a	Pre-flight documentation, NOTAM and weather briefing
b	Mass and balance and performance calculation
c	Aeroplane inspection and servicing
d	Engine starting and after starting procedures
e	Taxiing and aerodrome procedures, pre-take-off procedures
f	Take-off and after take-off checks
g	Aerodrome departure procedures
h	ATC compliance and R/T procedures
<b>SECTION 2 GENERAL AIRWORK</b>	
a	ATC compliance and R/T procedures
b	Straight and level flight, with speed changes
c	Climbing: i. best rate of climb; ii. climbing turns; iii. levelling off.
d	Medium (30 ° bank) turns
e	Steep (45 ° bank) turns (including recognition and recovery from a spiral dive)
f	Flight at critically low air speed with and without flaps
g	Stalling: i. clean stall and recover with power; ii. approach to stall descending turn with bank angle 20°, approach configuration; iii. approach to stall in landing configuration.
h	Descending: i. with and without power; ii. descending turns (steep gliding turns); iii. levelling off.
<b>SECTION 3 EN-ROUTE PROCEDURES</b>	
a	Flight plan, dead reckoning and map reading
b	Maintenance of altitude, heading and speed
c	Orientation, timing and revision of ETAs and log keeping
d	Diversion to alternate aerodrome (planning and implementation)
e	Use of radio navigation aids
f	Basic instrument flying check (180 ° turn in simulated IMC)
g	Flight management (checks, fuel systems and carburettor icing, etc.)
h	ATC compliance and R/T procedures

<b>SECTION 4 APPROACH AND LANDING PROCEDURES</b>	
a	Aerodrome arrival procedures
b	* Precision landing (short field landing), crosswind, if suitable conditions available
c	* Flapless landing
d	* Approach to landing with idle power (SE only)
e	Touch and go
f	Go-around from low height
g	ATC compliance and R/T procedures
h	Actions after flight
<b>SECTION 5 ABNORMAL AND EMERGENCY PROCEDURES</b>	
This section may be combined with sections 1 through 4	
a	Simulated engine failure after take-off (SE only)
b	* Simulated forced landing (SE only)
c	Simulated precautionary landing (SE only)
d	Simulated emergencies
e	Oral questions
<b>SECTION 6 SIMULATED ASYMMETRIC FLIGHT AND RELEVANT CLASS OR TYPE ITEMS</b>	
This section may be combined with sections 1 through 5	
a	Simulated engine failure during take-off (at a safe altitude unless carried out in an FFS)
b	Asymmetric approach and go-around
c	Asymmetric approach and full stop landing
d	Engine shutdown and restart
e	ATC compliance, R/T procedures or airmanship
f	As determined by the FE: any relevant items of the class or type rating skill test to include, if applicable: i. aeroplane systems including handling of auto pilot; ii. operation of pressurisation system; iii. use of de-icing and anti-icing system.
g	Oral questions

\* These items may be combined, at the discretion of the FE.

AMC1.FCL:235 § (d) und (e)