

Beginning lessons (first 10)©

Are these lessons and sequence for every student and instructor? No. Can the material be adapted into any program? Yes. Every instructor is expected to have a syllabus giving his plan for student instruction. For many years the FAA had published a small spiral notebook sized syllabus with some 30 lessons. I learned to fly and teach using the sequence from that syllabus. With experience (mistakes) I learned that some flexibility was required since one size did not fit all at least up to solo. All ground and flight work is taped for student playback at a later time. A first visit to the tower is made with the expectation that the student will make one visit for every three hours of flight time. Bring coffee.

Every lesson begins with a complete on the ground review of what we will do and why. All departure and arrival checkpoints and radio work is reviewed since I try never to leave or arrive in the same way or direction twice during the presolo phase. A familiarization flight to cover the main nearby airports visual points, and departure/arrival points are used if the student is unfamiliar with the area. The preflight and airport procedures are limited if this flight is deemed necessary.

After the first **three lessons** the student is expected to do the preflight and to have a checklist developing through two revisions and three more to go. The first three flight lessons will cover the four basics of climb, level, descent, turns and all slow flights and stalls. These will be done separately, in transition, at varying speeds, in different configuration, and in combination. You name it, we do it. The use of trim is integral to establishing hands-off flight as much as possible. We begin doing the Dutch roll on the second lesson during climb-out. I am not teaching how to fly a basic trainer, I am teaching how to fly any airplane. All banks are of 30 degrees except for all the steep turn lessons. Turns are 90 degrees or greater. At the end of the third lesson we go low and fly a river at 700" AGL for a mile or so. If any break in training occurs a 'required' review should take place of these basics.

Lesson four introduces emergency procedures, spirals, turns about a point, rectangles, S-turns, and river flying preferably in calm wind conditions but always in both left and right directions. **Lesson five**, ideally, is the same lesson using different references in the strongest wind available. In doing the previous lessons we have been building the basics for the maneuvers required in landing.

Lesson six is the putting together of the basics into a pattern at altitude initially. We walk and talk the airport pattern on the ground. We review the radio work required to arrive and depart a nearby airport hopefully with parallel runways.* At altitude somewhere between the two airports we fly through a simulation of two left and two right patterns using the destination airport runways for headings. Every simulated landing consists of a beginning from level cruise, a prelanding, an abeam the numbers power reduction, trimming to a hands-off approach airspeed that is held constant as the remainder of the pattern is flown. The addition of flaps, retrim, turn base, more flaps, turn final, full flaps, and retrim follow in due course. On final I will select an altitude for go-around or flare/go-around. The airspeed determines how the go-around is done by going to 20 degrees flaps immediately or flaps are 'milked' off until climb speed is attained.

Aircraft is retrimmed for Vy climb hands-off.

Once again we review the radio procedure for arrival and the student does the radio work until turning on to downwind. From this point on the instructor uses the radio until a departure is requested. The student is expected to verbalize the required thinking and procedures as they occur in the pattern. Every pattern ends with a go-around four left patterns and four right patterns with each four at successively lower altitudes down to the runway. Leaving for home the radio is given to the student.

The **seventh lesson** goes to another controlled airport where the go-around is used only if necessary. Ground preliminaries cover departure, arrival, and taxiing. Solutions thought through for being high or low on base and final. The arrival landing consists of a full-stop and taxiback. The student needs to know how to get familiar with ground procedures as well as pattern procedures. The situation is adjusted to expose the student to as many variables as traffic and wind conditions allow. All pattern work is done with the instructor on the radio.

Lesson eight is to an uncontrolled airport with all the departure and arrival procedures both as to flying and communications fully covered before entering the plane. As before the student uses the radio until the pattern work begins after making a full stop. The 360 and simultaneous communications is done by the student prior to the uncontrolled departure. The instructor handles the radio during the remainder of the pattern work until departure for home. Basic VOR navigation might be introduced if facilities are available.

Lesson nine is a visit to a Class C airport and may include visiting an FSS and TRACON. ATC visits can be arranged during low volume periods and good weather. More time is required for this lesson because of the visits but some landings should be made. Again the radio work is shared between student and the instructor. By the end of this lesson the student should be proficient in radio work, the short approach, slowflight in the pattern, adjustment for being high or low, and up to 12 knot 90 degree cross-winds.

Lesson ten is a 'required' pre-solo flight which, by pre-arrangement will be an ATC exercise with the controller directing the aircraft through about 45 minutes of flight. The intent is to expose the student anything that could happen at the airport through ATC direction. Typically this would include, changing runways, doing 360s, 270s, and 180s, variations of the landing options as directed, light signals, simulated radio problems, and some creative selections. The student is told that he will not be allowed to make a mistake. The same assurance is not offered to ATC or the instructor. From this flight the student is expected to be 'responsible' for the radio.

Solo usually takes place within the next three lessons when the student demonstrates ability to fly, communicate, and have enough reserve awareness to carry on a side conversation. Total time to solo is never an issue with the instructor. You're ready when we both agree you're ready.

*Why parallel runways? Because you don't want to go home all wound up.