Blue Skies Flight Training LLC Private Pilot Syllabus Flight Portion

- Blue Skies Flight Training, LLC [BSFT] generally does not offer ground school classes towards the written examination portion of the Private Pilot program. Instead, we suggest that the student use either King Flight Schools Private Pilot Ground School Course or the Sporty's Ground School Course. ASA and Gleim also make good test prep software. If the student desires an in-person ground school class, we can suggest one. Nonetheless, in the interest of standardization between instructors at BSFT, however, the flight training portion order listed herein is critical. This syllabus will be made available at https://blueskiesflightschool.com/preflight-planning/

- All safety procedures contained within the BSFT safety procedures handout are in effect and shall be complied with while conducting this private pilot flight training syllabus.

- The number of the flight lessons estimated in this syllabus may need to be adjusted to account for each student learning at his or her own pace, consistency, the need for repeating tasks to ACS Standards, etc.

- Each flight should allow for ground instruction time and preflight prior to the flight to discuss the maneuvers that will be accomplished for the flight, and some post brief time to discuss those maneuvers flown, signing the logbook, etc.

Length of Discovery Flight and Subsequent Flights: Discovery flights should generally not exceed 1.0 on the Hobbs. Subsequent flights will generally be two hour lessons consisting of about a one hour flight and one hour ground time including flight brief, preflight, and post brief to explain further about the private pilot program (in the case of the intro flight.) Cross country flights will be between three and four hour long lessons.

Discovery Flight: Under no circumstances shall first time pilots taxi, takeoff, maneuver within 1000 feet of the ground, or attempt to land an aircraft during the discovery flight. **After** the aircraft has reached 2000 feet MSL or higher, the Instructor may then transfer control to the student, in a trimmed for level flight condition, to teach straight & level flight [S&L] and trim. Level turns to a heading and climbs/descents may be practiced, however, the discovery flight will primarily include straight & level [S&L], climbs, descents, and turns to a heading.

Flights 2-7: Under no circumstances shall a student takeoff an aircraft unless that student has mastered and is proficient at taxiing, trimmed out S&L, climbs/descents, and slow flight. Landings may only be accomplished by the student if the student has mastered and is proficient at everything in these and the next section's lessons including S&L, slow flight, stalls, steep turns, simulated engine failure, emergency descents and ground reference maneuvers. However, prior to completion of these tasks, the student may be encouraged to remain on the flight controls WITH A VERY LOOSE GRIP, while the instructor manipulates the controls through the landing.

1. **Straight & Level flight.** Trimmed out S&L flight is a task which many instructors unfortunately gloss over before moving on to all other tasks and fail to revisit it enough while doing those. If the student can consistently maintain S&L for five minutes or more, with tolerances of plus/minus five degrees in heading and plus/minus 50 feet in altitude, then the next task(s) may be attempted. Different days with different wind gusts and density altitudes will need to be practiced. Emphasize as always a light grip on the yoke.

2. **Shallow/Medium Banked Turns.** After S&L is mastered, shallow to medium banked turns may be accomplished visually using roads and landmarks, via directional gyro turns to a heading, and maybe even timed turns however as always, emphasis should be on outside visual references. Don't forget to check/ reset the directional gyro every 15 minutes.

3. **Climbs/Descents.** Climbs/descents may be added next and should be accomplished via airspeed and vertical speed type climbs/descents, however, emphasis should still be on outside visual reference for proper pitch attitude as well. Then, a combo of turning climbs/descents should be practiced. A light grip on the yoke should continuously be emphasized throughout all lessons. After the student is proficient and comfortable with numbers 1-3 in this portion of the syllabus, you may then move on to slow flight.

4. **Slow Flight.** Slow flight is one of THE most important maneuvers in the private pilot program and one of THE most overlooked or glossed over maneuvers by flight instructors. Remember to accomplish clearing turns prior to all maneuvers such as slow flight, stalls, steep turns, emergency descents, and simulated engine failures. Slow flight should be practiced in both the dirty and clean configurations followed by in banking conditions. Emphasize to the student that the ACS calls for NOT hearing the stall warning horn during slow flight at least during the checkride and the speed to achieve that is approximately 60 mph indicated at 30 degrees flaps in the company Cessna 172s. Once different slow flight configurations can be consistently maintained, in different directions, compensating for the wind, 100 feet plus/minus altitude, 10 degrees bank plus 10 minus zero knots airspeed (ACS Standards), then numbers 5 and 6 in this portion of the syllabus may be attempted. Clearing turns should be emphasized between each maneuver such as slow flight, stalls, steep turns, emergency descents etc.

5. **Power OFF/ON Stalls.** Prior to this lesson, a brief should be given on the elements of the different types of stalls that may occur, including the two stalls that will be on the checkride and the two stalls that should be practiced at this point. Now is also a good time to also brief on spin awareness. My favorite acronym for spins is PARE: Power to idle, Ailerons Neutral, Rudder opposite to the direction of the spin, and Elevator forward. Nonetheless, power off stalls in the landing (i.e. dirty) configuration should be practiced next, followed by power on stalls in the takeoff (i.e. clean) configuration. The next task should only be moved on to if ACS standards have been met AND the student completes stalls with confidence and comfort. Remember to accomplish power off stalls while banked no more than 20 degrees. Emphasis should be made during Power ON Stalls, that if the wing drops one way or another, ailerons should NOT be used to correct the dip. Instead, bring the nose of the aircraft below the horizon and correct with opposite rudder.

6. **Steep Turns.** Steep turns should be next on the list. Steep turns should be started at cardinal headings and even thousands or even thousand five hundred foot increments. A series of two 45 degree banked, 360 degree turns should be accomplished in each direction. Once altitude can consistently be maintained at a 45 degree bank and plus or minus 100 feet, the next section may be commenced. If a student is having trouble consistently maintaining altitude within ACS tolerances, most likely they are paying too much attention to the instruments inside instead of looking outside at the bank angle in relation to the horizon. Outside visual reference should be maintained at least 80% of the time during the maneuvers, 20% inside. In the case of steep turns, an occasional glance inside at the attitude indicator to verify bank angle and maybe another glance at the altimeter to verify altitude is all that is needed inside. Otherwise steep turns are 90% outside visual references.

Flights 8-15

1. **Emergency Descents/Simulated Engine Failure & Other Emergencies.** Emergency descents and simulated engine failures should be introduced first in this section and then practiced throughout select subsequent flights lessons. **UNDER NO CIRCUMSTANCES NOR AT ANY TIME SHALL ANYONE SIMULATE AN ENGINE FAILURE OR PURPOSELY CAUSE AN ENGINE TO BE SHUT DOWN VIA TURNING OFF THE FUEL SELECTOR, BRINGING THE MIXTURE TO IDLE CUT OFF POSITION, OR BY TURNING THE MAGNETOS TO THE OFF POSITION.** Simulated engine failures are ALWAYS to be accomplished by bringing the THROTTLE very slowly to the idle position with the carburetor heat ON and a periodic clearing of the engine every one to two minutes throughout the entire maneuver. Engine clearing shall be accomplished by smoothly and slowly bringing the RPM from its idle position approx. 2000 RPM) then in a similar fashion but even slower, back to idle. Keep an eye on the EDM 730 for the shock cooling indication throughout the maneuver indicated by a blinking two digit number and red blinking "CLD." Don't forget at some point hereafter to introduce other emergencies/abnormal procedures as well such as alternator failure or wing fire for example. Student pilots shall NOT simulate engine failures or emergency descents while practicing on solo flights. **ALL SIMULATED ENGINE FAILURES SHALL BE ABORTED NO LOWER THAN 500 FEET AGL** unless one is being carried out in the power off 180 maneuver being conducted in an airport traffic pattern and terminates landing on the runway.

2. **Ground Reference Maneuvers.** Ground reference maneuvers, including rectangular course, turns around a point, and S-Turns across a road should be introduced and practiced in this section. Special emphasis on fields containing an emergency landing spot with no tall obstructions shall be briefed prior and chosen during ground ref maneuvers. Remember all ground ref are to be completed according to the ACS from 600- 1000 feet AGL. However, strictly for safety, I generally never fly during ground ref maneuvers any lower than 1000 feet AGL. Watch out for the closest very tall tower 6.8 miles SSW of Guthrie - 1110 AGL or 2105 feet MSL. Check the VFR sectional for the location of other tall towers.

3. **Slips to a Landing.** Slips to a landing may be introduced in this section and should first be practiced at altitude using a highway or straight line reference on the ground as a starting point. Placards in the company Cessna 172Ms read "Avoid slips with flaps extended". Emphasis to the student should be made, however, that in a real emergency, if altitude is too high to make the emergency landing spot, a slip with flaps may be accomplished. You can practice slips at altitude with 10 or 20 degrees flaps extended. Use extreme caution when slipping at 30 degrees flaps. Avoid slips at 40 degrees flaps just to be safe.

4. **Landings.** Only after mastering everything (at least to ACS standards or better) to this point, do we begin working on landings at Guthrie. Changing airports to practice landings initially should be avoided because the sight picture at the new airport then completely changes and visual references are all different at the foreign airport. Usually, I find it takes anywhere from between 20-80 landings before the average student is proficient and able to make multiple consecutive landings by themselves without the flight instructor taking the controls. Once they are relatively proficient at landings I will introduce go-arounds and I also try to complete at least one power off 180 with throttle being pulled very slowly to idle at mid-field downwind. Extreme caution should always be exercised when instructors (onboard only) are in charge of teaching the power off 180 maneuver. Nonetheless, I personally judge that someone is ready to go solo when they can show me at least 10 consecutive good landings without me intervening on the controls whatsoever. Then, they can start flying local solo concurrently to the next sections. If desired, an introduction to landing at other airports may be achieved with subsequent solo endorsements for other airfields within 25 nm, if desired.

Flights 16-25

1. **Short Field/Soft Field Takeoffs.** After the student has completed the milestone first solo, I then introduce them to a lesson or two of short field and soft field takeoffs and landings, including slips to landing and crosswind landing (weather permitting; see BSFT safety procedures for guidelines regarding crosswind limitations).

2. **Tower Controlled Landings.** I then take the student to a tower controlled field for the next one to two flights to gain experience communicating with an operating control tower. Usually I will go to Wiley Post and/or Stillwater so they can work on touch & gos at the tower controlled airport as well as work on acclimating to doing landings at a different airport.

3. **Dual Cross-Country Flight Planning.** After the tower work, I then start the dual cross-country phase. All students should be shown how to use the VFR NAV LOG flight planning sheets, E6B, plotter, and sectional chart for cross-country flight planning as their PRIMARY means of navigation. This ground session should generally take 2.0-3.0 hours and include the weight & balance, performance, and weather. If the student wants to use an iPad or equivalent device, the instructor may allow that and extend the ground session length to include device operation if both parties are willing and able. However, at BSFT we strive to create THE best and safest pilots possible and heavy reliance on automation (i.e. geo-referenced aircraft on devices) is not the way to do that. Old school pilotage and dead reckoning with a section chart, a clock, and their own eyes creates a much safer and better pilot than one who blindly follows magenta lines. However, devices used as a supplement are acceptable and are acceptable on checkrides as long as all info on the device is up to date. Nonetheless, cross-country flight planning may be tested on the written exam and the student must demonstrate ability in this area for the checkride. For this ground section, I would explain to the student where to get and how to interpret the weather as well as how to calculate the weight and balance and performance charts contained in the applicable POH. I also show them how to call Flight Service to get a weather briefing and how to file a flight plan via 1-800- WX BRIEF because that is what I have used for almost 25 years of personal flying and at least one of the main DPEs BSFT uses has the applicant call that number for both the Private and Instrument checkrides.

4. **Dual Cross-Country Flight.** I generally fly the dual cross countries in two or three lessons. My favorite go-to cross-country is either Guthrie to Weatherford or Guthrie to Clinton. Those two airports are somewhat hard to find and are not too long of a cross country yet not too short. For the next dual cross-country, I use Guthrie to McAlester to Stillwater which will then later be flown on their triangular long solo cross-country flight. As mentioned in the safety procedures, all students will be taught how to request VFR Flight Following and open a VFR flight plan.

5. **Simulated Instrument Flights.** After flying the cross countries with the student, but before beginning the solo cross country flights, at least one of the three hours of simulated instrument time should be accomplished and the remaining two hours should be accomplished concurrently to them flying solo cross-country or shortly thereafter. These three hours should include using instruments under the hood or a set of foggles to fly S&L, turns to a heading, constant airspeed climbs & descents, and recoveries from both nose high and nose low unusual attitudes.

6. **Night Flight.** The student must complete three (3) hours of night flight in this section. I generally do night flying in two lessons especially in the summer when the days are long. For the first night lesson I have them do 8 full stop taxi back landings at Guthrie. This should generally take about 1.3 hours on the

hobbs, leaving 1.7 hours needed to fulfill the remaining night requirements. For the night cross country, I generally go to Clinton Regional, Clinton Sherman, Weatherford, or whichever airport meets the necessary minimum time and distance requirements.

7. **Complete Review/Mock Checkride.** The final two or three flights shall be used as the three (3) hours within two (2) calendar months prior to the checkride and should include everything that will be on the checkride according to the latest Private Pilot ACS. This includes slow flight, power off and on stalls, steep turns, emergency descent, simulated engine failure, ground reference maneuvers, short and soft field take offs and landings, slips to landing, basic attitude instrument flying (including unusual attitudes), cross country flight planning, cross country diversions, and VOR Tracking. The two most difficult tasks of the private pilot, in my experience, seem to be the short field landings and steep turns. Therefore a good portion of the final time prior to the checkride will emphasize making the desired short field landing point within plus 200 feet, minus zero feet (ACS Standards) and steep turns plus or minus 100 feet, airspeed plus or minus 10 knots, bank plus or minus five degrees and roll out on entry heading plus or minus 10 degrees, all per the latest Private Pilot ACS Standards.