



Tandem Syllabus

Wheel Launch (WL) & Foot Launch (FL)

United States Powered Paragliding Association

Copyright © 2010-2019, duplication prohibited without written permission

Version 2019a
Jan 3, 2019

This syllabus is for Tandem Administrators putting on clinic. It endeavors to define the process and material that will help educate and evaluate those instructors wanting to become USPPA/USUA PPG Tandem Instructors. The course has been designed to help administrators perform these clinics in a reasonably standardized format and let applicants know what to expect when they attend.

[FL] means the item is required for foot launching but optional for wheel launching. To issue a wheel launch add-on or rating, the Wheel Launch Syllabus must be completed in addition to this one.

Instructor: I have given the training listed in this syllabus.
Applicant: I have received the training listed this syllabus.

_____, _____, _____
Print Instructor Name Instructor Signature Date

_____, _____, _____
Print Applicant Name Applicant's Signature Date

USPPA Tandem Syllabus



Tandem Administrators should cover this material thoroughly while offering personal techniques to serve as a starting point for new tandem instructors on how to conduct tandem flights as safely as possible while teaching their student. It is beneficial for an instructor to offer numerous techniques that can be applied when necessary.

Objective: Tandem Applicant should be able to work with a student (actual or the administrator roll-playing as the student) in an effective manner in each situation.

Task	---Initials---		Curr Date
	Stud	Instr	

1. Before Training Begins. (1:00 hr)

- (a) Documentation & Limitations: _____
 - i. Go over the applicant's documentation to insure he is eligible to be signed off for a Tandem Trainee or Tandem Instructor (as applicable). Check the USPPA web site for the most current requirements.
 - ii. Tandem Trainee may only fly with P2/PPG2 rated pilots and must accumulate and log: (FL) 24 tandem flights, or for (WL) 12 tandem flights. The Tandem administrator will check that this requirement is met and then may convert the Trainee rating to a full Tandem Instructor rating. No other syllabus needs to be added if it has already been added to a Tandem Trainee rating.
 - iii. Documents that must be carried on each flight: 1) member card showing tandem rating for WL and/or FL, 2) copy of current Exemption 9751 version.
 - iv. The exemption: what is exempted, its purpose, and how to find information about the current status.
- (b) Risk awareness and disclosure. There is risk involved, the applicant accepts the risk of his own volition. Fill out & sign any required waivers or forms..... _____
- (c) Current status of insurance..... _____
- (d) Payment plans and expectations _____
 - i. Cost and understanding that successful completion is not guaranteed since there is a performance requirement. It is understood that the administrator will work with the student to correct deficiencies, but it may require more training. These deficiencies must be thoroughly discussed and documented.
 - ii. What gear is provided, if any, and replacement of damaged gear policy.
- (e) Tandem pilot briefings..... _____
 - i. Before each flight: That the flight is conducted under an FAA exemption and the ultralight vehicle is not certified.
 - ii. Before first flight with a new student: What to hold, how to react in unexpected situations, where to put arms and legs in flight, other special considerations for the craft and situation.
- (f) Relevant parts of the Pilots Handbook of Aeronautical Knowledge (PHAK) and Powered Parachute Handbook (PPH) must be covered and are done so using this syllabus.
The books are available for free download from the FAA. _____

2. Fundamentals of Instruction. (2:00) hrs including classroom and field

- (a) Pass FOI written test, Go over any missed questions. This can be shown through USPPA test (if available), FAA documentation, or FAA Instructor Certificate (even if expired) _____

(b) Inflight challenges to learning _____

3. Aeronautical Decision Making (PHAK Ch 2)

(a) Hazards & Risk..... _____

(b) Hazardous attitudes and antidotes..... _____

(c) Resource management..... _____

(d) Risk management..... _____

(e) Situational Awareness and obstacles to keeping it..... _____

4. Weight and Balance (0:20)

(a) Arm, weight and moment..... _____

- i. How to adjust tandem rig based on known passenger weight.
- ii. Affect of fuel burn on CG.
- iii. Affect of passenger weight
- iv. Methods to determine CG (including calculating, weight on wheels, simulator).

(b) Rotational Inertial..... _____

- i. Increased moment of twisting.
- ii. Risk of riser twist and how to minimize.
- iii. Rotational Inertia and what causes higher value (mass far from pivot point).
- iv. Value of low rational inertia.

5. Performance (0:20)

(a) Review performance as covered in PPG 2 Syllabus..... _____

(b) Affect of much higher weights with dramatic worsening of climb and distance to clear obstacles..... _____

6. Gear and Setup (1:00)

(a) Basic Setup..... _____

(b) (WL) Need for front wheel(s) to lift before rear wheel(s)..... _____

(c) Harness setup and balance, Insuring that the student lifts off first and that the Instructor (rear pilot) can reach the brakes at all times..... _____

(d) Harness setup to minimize the student's chance of falling..... _____

(e) Importance and setup of intercom system _____

(f) Gear requirements for tandem operations as specified in exemption..... _____

(g) Maximizing Student Safety and Protection..... _____

7. Simulator (2:00)

Use simulator to setup gear and explain its operation.

(a) Explain setup..... _____

(b) Launch, inflight, landing explanation of what to expect, Common student errors and how best to handle them..... _____

- (c) Discuss positive transfer of control. Impart the importance both for these tandem training flights and those that will be flown by the Tandem Applicant. Rehearse the transfer while verbalizing “I have the controls” and “you have the controls.” _____
- (d) Getting into the seat and common errors like student lifting legs too early..... _____
- (e) Handling Emergencies..... _____
 - i. Motor failure.
 - ii. Riser Twist.
 - iii. Turns, especially making them without pendular roll swing.
 - iv. Initiating climbs and descents without pendular pitch swing.

8. Tips for Flying Tandems. (2:00)

- (a) Preflight _____
- (b) Launch
- (c) Inflight
- (d) Landing

9. Aeromedical (0:10) PHAK Ch 17

- (a) No flying under the influence of alcohol or medication that could impair pilot performance.
- (b) No flying with any sickness that could impair pilot performance or result in sudden incapacitation.
- (c) Where to find drugs prohibited by the FAA for pilots operating under FAR part 91.

10. Tips for Teaching While Flying Tandems. (2:00)

- (a) Preflight _____
- (b) Launch
- (c) Inflight
- (d) Landing

11. Assessment, comments, and sign-off or reason for extra training recommended. (1:00)

- (a) Assessment and comments should be entered on this syllabus in the space below. Anything that requires further training must be documented, with a reason including the relevant number and letter.
- (b) For Tandem Trainees:
 - i. Apprenticeship can be waived for instructors certified through other organizations as defined on the Instructor Requirements.
 - ii. Apprenticeship consists of helping train students with a current USPPA instructor. That instructor-in-charge must fill out a simple form (included on the syllabus) showing the time and tasks that were completed.
- (c) Administrator enters successful tandem ratings online and must include an image of the front page of this syllabus, signed by the admin and applicant attesting to completion/initialing of all sections.