



# Instructor & Tandem Syllabus

United States Powered Paragliding Association

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**T**his guide is intended to be used for instructor and/or Tandem administrators who are putting on clinic. It endeavors to define the process and material that will help educate and evaluate those experienced pilots wanting to become USPPA/USUA PPG instructors or USPPA 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.

**I have given the training listed in this syllabus appropriate to the ratings administered.**

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
Print Instructor Name                      Instructor Signature                      Date

**I have received training in, and understand the material covered in this syllabus, appropriate to the ratings I have earned.**

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
Print Student Name                      Student Signature                      Date

# USPPA Instructor Requirements

The RatingsProgram.PDF document contains the requirements for a USPPA Instructor. Successful completion of this clinic is a major element.

## Apprenticeship Form

During the apprenticeship, the applicant is expected to help train, observe, and generally help with the operation of the school. The instructor in charge recognizes that this is not a test, but rather a chance to impart wisdom that is best learned from experience.

The instructor in charge acknowledges that the apprentice instructor has completed \_\_\_\_\_ hours of apprentice time.

Training Tasks Accomplished and comments:

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Apprentice Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Instructor Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

USPPA# : \_\_\_\_\_

# USPPA Instructor Syllabus

Instructor Administrators should cover this material thoroughly while offering personal techniques to serve as a starting point for new instructors on how to teach powered paragliding. It is beneficial for an instructor to offer numerous techniques that can be applied when necessary.

**Objective:** Instructor 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.

<i>Task</i>	<i>---Initials---</i>	<i>Curr</i>
	<i>Stu</i>	<i>Instr</i>
<b>1. Before Training Begins. <i>Time 1:00 hr</i></b>		
A. Documentation & Limitations: .....	_____	_____
i. Go over the applicant's documentation to insure he is eligible to be signed off for an instructor clinic. Check the USPPA web site for the most current requirements (PPG3 rating, recommendations, etc.).		
ii. Applicant must only work with students as directed by the administrator.		
iii. Motors should not be started unless directed by the administrator.		
B. Risk awareness and disclosure. There is risk involved, the applicant accepts the risk of his own volition. Fill out and sign any required waivers or forms.....	_____	_____
C. Payment plans and expectations. It is important for the applicant to know what he can expect. ....	_____	_____
i. Clinic is two 8-hour days.		
ii. 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.		
iii. What gear is provided, if any, and replacement of damaged gear policy.		
D. USPPA Instructor Responsibilities, Obligations, Rating revocation procedures.		
<b>2. Fundamentals of Instruction. <i>Time 3:00 hrs including classroom and field</i></b>		
A. Pass Instructor written test, Go over any missed questions. ....	_____	_____
B. Importance of human limitations while learning, ..... especially when experiencing new sensations. And importance of insuring the student will respond correctly to instructor commands.	_____	_____
C. Recognizing when students are no longer learning.....	_____	_____
D. Teaching Styles & Attitude.....	_____	_____
E. Acceptable Flight Locations..... Until a student has gained knowledge to read sectionals and call FSS to determine the legality of his flight, the instructor must go over areas where the student may fly.	_____	_____
<b>3. Radio Communications. <i>Time 0:30 minutes</i></b>		
A. Radio Gear (USHPA, Aviation, FRS, Business Band, CB, Other).....	_____	_____
i. Importance of using		
ii. Mounting methods to student,		
iii. Ability for student to respond.		
iv. Annunciation, phraseology		

v.Importance of student's correct physical response to radio commands.

B.Value of having back-up communications (although it is not required). \_\_\_\_\_

4.Towing (if not used, still complete section D on risks) *Time 2:00 or 0:05 if only covering section D.* If the administrator is either USHPA or USPPA tow-rated, then he can also rate the applicant for tow here.

A.Proper Procedure.....\_\_\_\_\_

- i.Hookup, signals,
- ii.Tension during tow (reducing if anything goes wrong),

B.Towing Gear.....\_\_\_\_\_

- i.Line,
- ii.Bridle,
- iii.Release,
- iv.Weak Link

C.Methods and Dangers.....\_\_\_\_\_

- i.Stationary Winch (advantage of turnaround pulley for training)
- ii.Static Line (not for training)
- iii.Payout Winch Ground
- iv.Payout Winch Boat
- v.Step Towing (not for training)

D.Risks and Their Avoidance.....\_\_\_\_\_

- i.Overtowing risks.
- ii.Quick links.
- iii.Admonition not to use towing until proper instruction is received. This may be part of the clinic but will be in addition to the hours required.
- iv.Requirements of towing certification, availability of training and certification (through USHGA or USPPA instructors.)

E.Flying on Tow (if used) .....\_\_\_\_\_

- i.Hookup, signals (especially for release).
- ii.Tension during tow (reducing if anything goes wrong).
- iii.Initial Climb.
- iv.Emergency procedures: lockout, no release, entanglement.

5.Simulator *Time 2:00 hrs*

Simulator is probably the most important time an instructor will spend with his student because it offers a chance to make sure the student will react properly to unanticipated situations and to radio instruction. The administrator should insure the applicant can teach these areas with confidence.

A.Importance of practice with distractions.....\_\_\_\_\_

B.Getting into the seat and common errors.....\_\_\_\_\_

C.Emergencies

- i.Unable to get in seat, risks and what to do with the student.
- ii.Common emergency response and when to apply it (hands up, power off). Value of steering when near to the ground and reacting slowly (hands up smoothly and reduce power smoothly).

- iii. Need to stay on the throttle while climbing until at a safe altitude.
- iv. Brake line tangle.
- v. Rear riser turns.
- vi. Parachutal stall (hands up, power off).
- vii. Stabilio line pull (this may be moved to kiting where it can be demonstrated much clearer).
- viii. Motor failure.
- ix. Surge/retreat.
- x. Oscillation and proper reaction.
- xi. Radio Communcation Failure, how to recognize it, what to do.

D. Flight..... \_\_\_\_\_

- i. Launch.
- ii. Flight including safe brake positions, one hand up one hand down for turning.
- iii. Landing.

6. Tips for Teaching and common errors. *Time 8:00.*

It is understood that a new student would never have all this thrown at him at once. The purpose is to insure the applicant knows how to clearly explain each item. Plus, the applicant should describe the common errors that are made. The administrator does not need to cover all the material. Only that which is required to determine ability. This is where the bulk of the clinic will concentrate.

A. The applicant should be able to instruct a student in the following areas. .... \_\_\_\_\_

- i. Motor Equipment Explanation including harness styles, hang points and how they're different, Motor types, Drive types (direct, redrive best, redrive gear), weight shift and cage types (rigid, non-rigid), cage safety, frame safety.
- ii. Wings including DHV/AFNOR/CEN/DULV ratings. Value of beginner wings, difference between performance, size/speed/handling/aspect ratio.

B. Safety Equipment. .... \_\_\_\_\_

- i. Reserve including styles, deployment, repacking, mounting issues, preflight.
- ii. Advantages and disadvantages for using the reserve during initial training.
- iii. Helmet, footwear, hook knife.

C. Judgment – The single most important aspect of training is instilling good judgment. Poor judgment causes the most fatalities. They should be told about the importance of reading the Incidents Reports at [www.USPPA.org](http://www.USPPA.org).

- i. The selection Process and Risk Assessment.
- ii. Selecting equipment.
- iii. Selecting a launch or landing field.
- iv. Selecting route, altitude and maneuvers.
- v. Selecting weather to fly in.

D. Preflight..... \_\_\_\_\_

- i. Starting/propeller safety. Applicant should be familiar with at least three serious accidents regarding propeller injuries and what would have prevented them. Importance of verifying throttle position and being well positioned during start. Precautions for electric start.
- ii. Wing. Lines, knots, repairs sheath, etc.
- iii. Untangling (this can be demonstrated by having the student untangle a wing while explaining the process or directing a student how to untangle it.

- iv. Fueling and oil mix requirements. Availability of avgas and how to acquire.
- E. Field Assessment & Weather..... \_\_\_\_\_
  - i. Picking a field suitable for new students or risks of obstructions.
  - ii. Describing how winds affect choices of launch areas.
  - iii. Analyzing the weather from winds, clouds, other observable phenomenon. Even though a new student may not understand everything, it's still valuable to explain what's going on at every opportunity.
- F. Layout..... \_\_\_\_\_
- G. Hooking in..... \_\_\_\_\_
- H. Kiting..... \_\_\_\_\_
  - i. Straight-arm method, limitations and benefits.
  - ii. Kiting, reverse and forward inflation methods including "wall" building.
  - iii. Motor, reverse and forward inflation methods including "wall" building.
- I. High Wind (if conditions don't permit, discuss)..... \_\_\_\_\_
  - i. Risks (lifted, dragged, etc).
  - ii. Depowering the wing.
  - iii. Helping a student who's getting dragged.
  - iv. Inflating and controlling.
- J. Launching..... \_\_\_\_\_
  - i. Forward – no wind (less than 2 mph).
  - ii. Forward – wind from 2 – 6 mph.
  - iii. Reverse inflation.
  - iv. Getting in the seat including radio recommended radio procedures.
- K. Inflight..... \_\_\_\_\_
  - i. Turns.
  - ii. Slow/fast flight.
  - iii. Pendular issues & practice.
  - iv. Dangers of low, low & downwind, steep turns, wingovers, etc.
  - v. Explain, as would be to a student, the downwind demon.
- L. Landing..... \_\_\_\_\_
  - i. Pattern.
  - ii. Flare.

7. Assessment, comments, and sign-off or reason for extra training recommended. *Time 1:00 hr*

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. Explanation of Apprenticeship

- 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. Send the following documents to the USPPA office (address on web site) to be issued the Instructor rating.

- i. Rating Application form, filled out by the instructor administrator, along with the written test results (score only, do not send the test).
- ii. This filled out syllabus,
- iii. The apprentice instructor's completion form.

# 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.

<i>Task</i>	<i>---Initials---</i>	<i>Curr</i>
	<i>Stu</i>	<i>Instr</i>
	<i>Date</i>	
8. Before Training Begins. <i>Time 1:00 hr</i>		
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.		
iii. Documents that must be carried on each flight: 1) member card showing tandem rating, 2) copy of Exemption 9751		
B. Risk awareness and disclosure. There is risk involved, the applicant accepts the risk of his own volition. Fill out and sign any required waivers or forms.....	_____	_____
C. Payment plans and expectations. It is important for the applicant to know what he can expect. ....	_____	_____
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.		
D. What the tandem pilot (Trainee/Instructor/Admin) must tell each student before each flight. That the 1) flight is conducted under an FAA exemption, and 2) the ultralight vehicle is not certified.....	_____	_____
9. Fundamentals of Instruction. <i>Time 3:00 hrs including classroom and field</i>		
A. Pass FOI written test, Go over any missed questions. This can be shown through FAA documentation or FAA Instructor Certificate, even if expired .....	_____	_____
B. Inflight challenges to learning .....	_____	_____
10. Theoretical		
A. Weight and Balance.....	_____	_____
B. Increased moment of twisting and risk of riser twist and how to minimize.....	_____	_____
C. Performance decrease due to higher weight.....	_____	_____
11. Gear and Setup		
A. Basic Setup.....	_____	_____
B. Harness setup and balance, Insuring that the student lifts off first and that the Instructor (rear pilot) can reach the brakes at all times.....	_____	_____
C. Harness setup to minimize the student's chance of falling.....	_____	_____
D. Importance and setup of intercom system .....	_____	_____
E. Gear requirements for tandem operations as specified in exemption.....	_____	_____

12. Simulator *Time 2:00 hrs*

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 such as student lifting legs too early..... \_\_\_\_\_
- E. Handling Emergencies..... \_\_\_\_\_
  - i. Motor failure.
  - ii. Riser Twist.

13. Tips for Flying Tandems. *Time 2:00.*

Cover areas that tandem pilots are likely to encounter.

- A. Preflight ..... \_\_\_\_\_
- B. Launch ..... \_\_\_\_\_
- C. Inflight ..... \_\_\_\_\_
- D. Landing ..... \_\_\_\_\_

14. Tips for Teaching While Flying Tandems. *Time 2:00.*

Cover areas that tandem pilots are likely to encounter.

- A. Preflight ..... \_\_\_\_\_
- B. Launch ..... \_\_\_\_\_
- C. Inflight ..... \_\_\_\_\_
- D. Landing ..... \_\_\_\_\_

15. Assessment, comments, and sign-off or reason for extra training recommended. *Time 1:00 hr*

- 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. Send the following documents to the USPPA office (address on web site) to be issued the Instructor rating. .... \_\_\_\_\_
  - i. Rating Application form, filled out by the instructor administrator, along with the written test results (score only, do not send the test).
  - ii. This filled out syllabus,
  - iii. The apprentice instructor’s completion form.