

## **PSTP Competency Assessment tool**

**Instructions:** The purpose of this tool is to assess the proficiency of Junior Trainees in the PSTP Core Competencies. It is not confidential. We ask that multiple individuals (including the PSTP trainee, their Dissertation Chair/Mentor, Dissertation Committee Co-Chair, and Senior Trainee Peer Mentor) complete this tool separately. Each individual will complete the tool annually so that the Trainee's growth in the program can be documented. Please answer honestly, the tool is intended to: 1) document how the Trainee progresses in the core competency areas over the course of training in the Program and 2) identify areas for growth.

**Action steps and use of tool (Trainee):** Complete the assessment. Once the tool is completed, please:

- 1) Upload to your electronic student portfolio.
- 2) Send a copy to the PSTP office.
- 3) Discuss the results at your annual Dissertation Committee meeting. Compare your own ratings with those of your Dissertation Chair/Mentor, Dissertation Committee Co-Chair. If there are differences, discuss them and come to an agreement on next steps needed to support your growth.
- 4) Use the assessment tool to support completion of your annual Individual Development Plan for doctoral students detailing your goals for the coming year.
- 5) If you are a Junior Trainee, discuss the results with your Senior Trainee Peer Mentor. Again, if there are differences, discuss them and come to an agreement on next steps needed to support your growth. This discussion may also inform your Individual Development Plan.

**Action steps and use of tool (Dissertation Chair/Mentor and Dissertation Committee Co-Chair, and Senior Trainee Peer Mentor):** Complete the assessment based on your perception of your Trainee's level of competence in each of the areas. Once complete, please:

- 1) Email a copy of the completed assessment to: your Junior or Senior Trainee and cc: the PSTP office.
- 2) Discuss the assessment results at the annual Dissertation Committee meeting with your Trainee. Compare your own ratings with those of your Trainee. If there are differences, discuss them and come to an agreement on next steps needed to support their growth.

**Uses of Assessment results:** The PSTP Competency Assessment results will be used in two ways: 1) to identify areas in which individual Junior and Senior Trainees still need to grow and the resources needed to master these competencies and 2) to document the overall success of PSTP in supporting the development of these core competencies in its Junior and Senior Trainees. The data across all Trainees will be aggregated for this second use. Any reporting of program-level data will be confidential.

**First, a few questions about you:**

Name: \_\_\_\_\_

Which of the following best describes you:

- \_\_\_\_\_ PSTP Junior Trainee
- \_\_\_\_\_ PSTP Senior Trainee Peer Mentor
- \_\_\_\_\_ Dissertation Committee Chair/Mentor
- \_\_\_\_\_ Dissertation Committee Co-Chair

If you are a trainee, which year are you in the PSTP Program?

- \_\_\_\_\_ 1<sup>st</sup> year
- \_\_\_\_\_ 2<sup>nd</sup> year
- \_\_\_\_\_ 3<sup>rd</sup> year
- \_\_\_\_\_ 4<sup>th</sup> year
- \_\_\_\_\_ Other (please describe):

**Next, please evaluate skills and abilities in the following areas. Please refer to the *Supplemental Materials for Competency-Based Assessment for PhD Scientists* (Verderame, Freedman, Kozłowski and McCormack 2018) document in choosing the appropriate level, where:**

- 0 = Not Yet at a Beginning PhD Student Level**
- 1 = Beginning PhD Student Level**
- 2 = Advanced PhD Student Level**
- 3 = PhD Graduate Level**
- 4 = Early Career Scientist Level**
- 5 = Science Professional Level**

		0	1	2	3	4	5
<b>1</b>	<b>Broad Conceptual Knowledge of a Scientific Discipline</b>						
	Knowledge base for multiple disciplines acquired from classes, seminars, journal clubs, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Broad scientific approaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2</b>	<b>Deep Knowledge of a Specific Scientific Field</b>						
	Historical Context of a specific area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Current content expertise in the specific area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Tools and approaches for a specific area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		0	1	2	3	4	5
<b>3</b>	<b>Critical Thinking Skills</b>						
	Recognize important questions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Design a single experiment (answer questions, controls, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Interpret data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Design a research program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4</b>	<b>Experimental Skills</b>						
	Identify appropriate experimental protocols	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Design and execute experimental protocols	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Identify and troubleshoot technical issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Lab safety & regulatory issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Research records and data storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Recognition of data ownership	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5</b>	<b>Computational Skills</b>						
	Basic statistical analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Bioinformatics literacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6</b>	<b>Collaboration &amp; Team Science</b>						
	Openness to collaboration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Self-awareness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Disciplinary awareness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Integration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Team skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		0	1	2	3	4	5
<b>7</b>	<b>Responsible Conduct of Research and Research Ethics</b>						
	Knowledge about responsible conduct of research (RCR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Ethical decision making (EDM) in RCR (outcome to process)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Moral courage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Integrity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>8</b>	<b>Communication Skill</b>						
	Informal oral presentation skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Formal oral presentation skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Written communication – scientific manuscript	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Written communication – grant proposals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Written communication – meeting poster	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Communication with the public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9</b>	<b>Leadership Skills</b>						
	Vision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Integrity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Group dynamics and interpersonal skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Organization and planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Decision-making	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Problem-solving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managing conflicts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>10</b>	<b>Survival Skills</b>						
	Motivation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Perseverance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Adaptability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Professional development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Networking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>