

Biology 5001: Topics in Biology Teaching Competencies

The following competencies provide a set of general tasks that instructors can do to help them become successful, well-rounded educators within their field of study.

A. Foundational: “What do teaching assistants need to do to be successful educators?”

1. *Bring disciplinary knowledge into teaching:* Reflect on their disciplinary knowledge (includes content, skills, procedures, and metacognitive knowledge) as this applies to their teaching.
2. *Become part of the community:* Demonstrate an integrated understanding of themselves as ethical, collegial individuals, teachers, and scholars within their classrooms, departments, and disciplines.

B. Postsecondary: “What do teaching assistants need to understand about higher education to have successful careers as educators?”

1. *Explore career choices:* Describe how they have explored and situated their practice and potential career choices within the contexts and cultures of postsecondary institutions.
2. *Review and discuss educational standards* (e.g. Vision & Change, National Science Education Standards, Common Core, etc.) and policies in postsecondary environments.

C. Pedagogical: “What do teaching assistants need to do to be successful teachers?”

1. *Gain knowledge on how people learn and associated teaching techniques:* Discuss research on how people learn and apply this literature to teaching consistent with these principles of learning, using a variety of techniques appropriate for the discipline, level, and learning context.
2. *Set and communicate learning goals and expectations,* in their sample work for the course, both for individual class sessions and the overall course, that are appropriate for the discipline, level, learning context, and the institutional curriculum.
3. *Use inclusive and intellectually open teaching practices:* Demonstrate the ability to create a learning environment that supports the academic success of all students by respecting diverse viewpoints, fostering open inquiry, and being responsive to the varied backgrounds and learning needs of every student.
4. *Develop effective assessments in alignment with learning outcomes:* Design methods to assess student learning responsibly, equitably, and in alignment with learning goals, and use the results to enhance student learning.
5. *Apply discipline specific evidence-based teaching approaches:* Select evidence-based pedagogical approaches specific to the discipline and which facilitate student learning of disciplinary content.
6. *Reflect on teaching:* Devise and describe means to assess and improve their own teaching performance through inquiry-based practice informed by a community of scholarly teachers.

The original competencies have been modified from a document developed by the National Consortium for Graduate and Professional Student Teaching. These competencies have been included in the following presentations:

Kalish, A., et al. Designing a Competency-Based Approach to Graduate & Professional Student Development. Peer reviewed, pre-conference workshop presented at Pencils & Pixels: 21st Century Practices in Higher Education. 37th Annual POD Conference, Seattle, Washington, October 24-28, 2012. With Laura LB Border, Elizabeth O’Conner Chandler, Joana Gilmore, Lauren Griffith, Steven Hansen, Katherine Dowell Kerns, S. Spencer Robinson, William Rando, and Linda von Hoene.

Kalish, A. & Kearns, K. Promoting scholarship with assessable curricula for graduate and professional students. presented at Freedom to Connect — Freedom to Risk — Freedom to Learn. 38th Annual POD Conference, Pittsburgh, Pennsylvania, November 6-10, 2013

Kalish, A. & Hansen, S. What Should They Know: Desired Teaching Competencies for New PhDs Evidence Based Learning and Teaching: 33rd Annual Lilly Conference. Miami University: Oxford, OH. November 21-24, 2013.

Biology 5001: Topics in Biology Career Competencies

The following competencies were developed with feedback from employers in multiple organizational spheres, including professional services (e.g., accounting, engineering, law), education, and government.

Critical Thinking/Problem Solving:

Exercise sound reasoning to analyze issues, make decisions, and overcome problems. The individual is able to obtain, interpret, and use knowledge, facts, and data in this process, and may demonstrate originality and inventiveness.

Oral/Written Communications:

Articulate thoughts and ideas clearly and effectively in written and oral forms to persons inside and outside of the organization. The individual has public speaking skills; is able to express ideas to others; and can write/edit memos, letters, and complex technical reports clearly and effectively.

Teamwork/Collaboration:

Build collaborative relationships with colleagues and stakeholders by demonstrating respect for individual differences and contributing to a team environment that encourages constructive dialogue and cooperation. The individual is able to work within a team structure, and can negotiate and manage conflict.

Digital Technology:

Leverage existing digital technologies ethically and efficiently to solve problems, complete tasks, and accomplish goals. The individual demonstrates effective adaptability to new and emerging technologies.

Leadership:

Leverage the strengths of others to achieve common goals, and use interpersonal skills to coach and develop others. The individual is able to assess and manage his/her emotions and those of others; use empathetic skills to guide and motivate; and organize, prioritize, and delegate work.

Professionalism/Work Ethic:

Demonstrate personal accountability and effective work habits, e.g., punctuality, working productively with others, and time workload management, and understand the impact of non-verbal communication on professional work image. The individual demonstrates integrity and ethical behavior, acts responsibly with the interests of the larger community in mind, and is able to learn from his/her mistakes.

Career Management:

Identify and articulate one's skills, strengths, knowledge, and experiences relevant to the position desired and career goals, and identify areas necessary for professional growth. The individual is able to navigate and explore job options, understands and can take the steps necessary to pursue opportunities, and understands how to self-advocate for opportunities in the workplace.

Global/Intercultural Fluency:

Demonstrates the ability to interact respectfully and effectively with individuals from a wide range of backgrounds and perspectives. The individual shows openness, professionalism, and cultural awareness while engaging with others in a manner that supports mutual understanding and productive collaboration.

Self-awareness:

The ability to demonstrate an understanding of how inherent and/or developed personality traits and characteristics contribute to personal and professional success. Including but not limited to: resiliency, reliability, stress management, dealing with failure, and motivation.

Resources:

National Association of Colleges and Employers. (2013). *Professional competencies for college and university career services practitioners* (PDF). <https://www.nacweb.org/uploadedfiles/files/Misc/career-services-competencies.pdf>

The University of Tampa. (2024). *What is Spartan Ready?* <https://www.ut.edu/campus-life/leadership-engage/spartan-ready>