Rethinking training for Cornell STEM graduate students & postdoctoral scholars...*why*?
Because a majority of us will end up working beyond academia.

**The Cornell BEST Program** is pleased to have substantial support from across the Ithaca campus to extend its reach beyond the original NIH funded biomedical fields to include all STEM graduate students and postdocs in its scope. Through the additional support from the graduate school, the colleges of agriculture and life sciences, engineering, arts and sciences, human ecology and veterinary medicine, we report over 1100 touches.

In addition, as seen in the graph at left we have **significant involvement of external partners** as well as faculty and staff in rethinking the training of PhDs for their future careers.

The Cornell BEST has extensive collaborations with the efforts of the Graduate Career Services.

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"The future of biomedical research depends upon a sustainable and robust workforce, in which talented, well-trained scientists are best prepared to make significant contributions in academia, industry, government, business, and other venues." –Francis Collins, MD, PhD, NIH Director
“The program was challenging because we used concepts and new knowledge that extended far beyond our current skill set. This was very successful because it allowed us to have a very hands-on approach in a new field, and also remember the seminar much better by making direct use of what we learned.”

–ProSky BESTernship participant

Speaking business

As a panelist at the NYBIO Conference, Wisler Charles, graduate student in Biological and Biomedical Sciences, was exposed to thought leaders in the biomedical and pharmaceutical industry from across the state. Taking advantage of the one-on-one partnering meetings, he met with several small and large company executives who shared their advice and even tried to recruit him to their firms.

Office and the Office of Postdoctoral Studies assist in early career exploration. Together with CU-CIRTL and the Center for Teaching Excellence over 200 workshops are offered annually to guide trainees in their Career Development, Leadership & Management, Teaching, Responsible Conduct of Research, and Personal Development.

Two hallmarks of the Cornell BEST Program are its flexibility and experiential nature. Participants can sample all career tracks to get exposed to the career possibilities or focus on one in particular to gain the skills and hands-on experience that will make them more attractive to future employers.

Trainee initiated career exploration and experiences are strongly encouraged, and whenever the BEST Program hosts an event it is seen as a leadership opportunity for its trainees.
Trainee initiated project experiences are encouraged, subject to program staff approval and available funding. Examples include…

BEST participant in the Communication Track Ashley Campbell, Ph.D. student in the field of microbiology co-authored two Cornell Chronicle articles with guidance from Merry R. Buckley, education and outreach program coordinator for the Baker Institute for Animal Health and BEST Program mentor.

The BEST Program supports the trainee run Cornell Graduate Consulting Club (CGCC) and ASAP (Advancing Science and Policy). They offer informative sessions, training and practice. Other BEST trainees have received travel awards and fellowships for leadership experiences at GE Global Research, ARPA-E, NYBIO, High Tech Rochester, and in Medical Devices, Professional Women in Advocacy, Entrepreneurship and early commercialization.

BEST trainees such as Kristine Kolkman Champion (left), postdoctoral scholar in neurobiology and behavior, serve not only as organizers but also as moderators for panel discussions like this one on careers in governance, risk and compliance.
“The Cornell BEST program embodies the best of our efforts to ensure that Cornell Graduate Students and Postdocs are exposed to a variety of potential careers as a part of their training at Cornell. I am extremely pleased that our trainees are availing themselves of these outstanding opportunities to broaden their training.”

--Avery August, Principal Investigator, Cornell BEST Program

The demographics of the BEST applicants reflect the diversity of the life sciences and physical sciences at Cornell and are an early indicator that our outreach is effective. The postdoctoral population is slightly under-represented compared to the total pool.

In the one year since the BEST Program was funded, there are some early outcomes that bear highlighting: A postdoctoral scholar who had completed the ProSky BESTernship accepted an offer at Kraft Foods; a graduate student who has just been offered a position at a large national research lab to do strategic analysis was told what set them apart from other candidates was the case competition experience. Two graduate students and a postdoctoral scholar working together to bring MIT’s ComSciCon to Ithaca received 88 applications from six upstate NY universities. Their successful fundraising will allow for a smooth event with high profile keynote speakers and facilitators.

On the next pages are some additional highlights from the most popular offerings enabled by the BEST Program at Cornell. Evidence of a cultural change include many new graduate student recruits reporting they chose Cornell in part because of the BEST Program; faculty referring their students and sometimes their whole lab to the BEST Program; and repeated high ratings for the course offerings and universal recommendation to others.

We look forward to continuing to empower graduate students and postdoctoral scholars to take charge of their careers and to enable them to gain the experiential skills that their future employers seek.

It’s time to rethink, prepare, and be ready for tomorrow’s careers.
No matter what area of science and engineering you plan to pursue, there are basic business skills that you will need to advance your career. Many of us have learned this too late, having to quickly incorporate business and managerial skills to survive in our jobs.

The **Business as a Second Language (BSL)** 2 credit minicourse was developed by the BEST Program to fill the gap for scientists and engineers who want to take Johnson Graduate School of Management courses, but lack the background and vocabulary to integrate smoothly. BSL is a seven week immersive case-based broad spectrum overview of key business topics, aimed at helping participants decide which areas within business they would like to continue learning about, regardless of career aspiration. From finance and accounting methods (how will you set up your own consulting business?), profit and loss statements (how to evaluate job offers from two companies), negotiating skills, and assembling a team from a business and management perspective, trainees are exposed to scientific case studies to emphasize and immerse the student in business and managerial principles. Trainees form interdisciplinary teams, research market needs and prepare a business case, complete with a presentation of their high-tech solution.

“...a great introduction to many of the terms and ideas that are used in a business setting.”

-Lena Bartell
By the numbers…

New courses developed: 3, each held 1-4 times a year
Clubs started and supported: 5
Workshops, Seminars and Career Panel Discussions: 28
Number of events initiated by BEST Trainees: 18

The Finding your Scientific Voice presentation workshop (6 three-hour sessions) uses improvisation, physical and vocal exercises, and multiple presentation assignments to help trainees acquire skills needed for constructing effective scripts for professional contexts, including the elevator pitch, media interviews, chalk talks, formal conference presentations and job interviews. Developed through support of the BEST Program, the format incorporates full video recording, peer assessments and individualized instructor feedback to develop trainee skills to incorporate humor, read their audience, and connect with listeners. Additional benefit comes from participants emanating from disparate disciplines such as plant breeding and genetics, applied and engineering physics, crop and soil sciences, pharmacology and biomedical sciences. Three separate shortened versions (one three-hour session) of the workshop were developed for faculty, postdocs and graduate students.

Science Policy Bootcamp: from concept to conclusion, is a fall semester 3 credit course developed by co-PI Chris Schaffer. During the course small student teams identify a key science policy issue, thoroughly research the issue, formulate a detailed plan to address the issue, and implement their plan for solving the problem toward the end of the term. The course requires a tangible policy-making outcome; examples include producing technical reports and analysis, drafting legislation, commenting on Federal or State rulemaking, writing legal briefs to support legal action, launching public outreach campaigns, or raising press awareness of an issue. Through active research and advocacy work the unique approach will help train a generation of scientists who are both passionate about and effective in engaging policy makers to solve some of our biggest problems including energy, climate change, health care, and education.

The Pre-Seed Workshop (PSW) is a hands-on fast paced two and a half day event to evaluate early university research inventions to determine potential paths forward to commercialize the idea. BEST trainees on each Pre-Seed Workshop team assist in all aspects of commercial assessment of the high tech ideas. A hand-picked multi-disciplinary team of regional experts in business, technology transfer, intellectual property law, regulatory affairs, finance, or marketing are assembled around scientists and engineers from the life sciences, physical sciences, IT and beyond. Guided by experienced entrepreneurial coaches, the teams work through the twenty questions one needs to ask before deciding to commercialize a new high-tech invention. Each idea champion then presents to a panel of experts from venture capital and angel investment groups who give constructive feedback on what the team should address in the near and long-term to assure success. The PSW, as part of a New York statewide network, has a franchise style model that has successfully been implemented in Indiana and Switzerland. (www.preseedworkshop.com)
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