But traditional grad school is no longer the only—or, in many cases, the best—route into careers using science or technical skills. Professional science master’s (PSM) degree programs, which open lucrative opportunities in the applied aspects of scientific and technological fields, are sprouting across the country. These 2-year terminal programs for students who already have a bachelor’s degree do not generally provide the fellowships or assistantships that pay most people’s way through traditional, Ph.D.-focused grad programs, but enhanced GI benefits could cover those costs if the bill becomes law, as it may within the next couple of weeks. Financial aid is also available.

A professional master’s in a field related to national or homeland security could therefore be just the ticket for the veteran wanting to work in applied areas of science. Apart from a large number of PSM programs with foci relevant to national security topics, there currently are two PSMs dedicated to specifically defense-related topics: the Air Force Institute of Technology’s "Combating Weapons of Mass Destruction" and the University of Maryland, University College’s "Biosecurity and Biodefense."

NPSMA Annual Conference Workshop Topics Outlined

The NPSMA 2008 Annual Conference will be held on Thursday, November 13 and Friday, November 14 at the Georgia Tech Hotel and Conference Center in Atlanta. Included in the event will be a series of interactive workshops designed to encourage the sharing of strategies, successes, and lessons learned while developing and sustaining PSM degree programs.

The workshop topics will focus on curriculum concerns, engaging employers, student and alumni issues, media relations for PSM’s, and programs in entrepreneurship.

Details pertaining to conference networking opportunities, keynote speakers, and general session content will be announced in the coming weeks.
“Staying Competitive”, Heather Chikoore, State Legislatures, June 2008 (excerpt)

Imagine an employee with a master’s degree in biotechnology who is also trained to negotiate with the Food and Drug Administration, work on a patent law team and lobby Congress. Or someone who has a master’s in forensic science and whose skills qualify her to lead teams of people and communicate complex information to the public. How do math and science students gain deep scientific knowledge and the business skills needed by today’s scientific and technological industries? Many believe the professional science master’s (PSM) degree is the answer.

Increasingly, businesses are seeking employees with skills in a STEM (science, technology, engineering and mathematics) subject who also have skills required for business, communication, policy or leadership. Some of the fastest-growing and highest-paying jobs require scientific or mathematical prowess and the ability to apply that knowledge in a real-world setting.

The professional science master’s degree is designed to allow graduate students to pursue advanced training in science or mathematics, while also developing skills highly valued by employers. Programs consist of two years of academic training along with a professional component that may include internships and “cross-training” in business and communications.

(Representative Winckler) says the five PSM degrees offered at University of Northern Iowa, ranging from biotechnology to ecosystem management, are designed to meet the needs of Iowa businesses and industry. Students see science and math concepts implemented in a real-world setting through internships. “These are graduate students who are receiving high-paying jobs, often in Iowa, when they graduate,” she says.

Many Offer Their Perspectives on the Benefits of the PSM Degree

"In today's knowledge economy, professional science masters degree programs have a critical role to play in keeping America competitive by creating linkages between institutions and industry to prepare scientists with the practical training they need to work in high-need fields."

- Sen. Edward M. Kennedy (D-MA)

“These skills are absolutely necessary to compete in today’s global workforce and go far beyond what a student learns with a traditional research degree. It is very clear from the businesses, industries, non-profit and government agencies employing PSM graduates that this degree readily satisfies current workplace demands.”

- Elizabeth Friedman, Illinois Institute of Technology

“If the country needs more scientists to spur economic growth, this is a great way to get them. The programs graduate people who know enough science to do useful things in theory, but who also know enough about navigating companies to actually accomplish things in practice.”

- Geoff Davis, Sr. Quantitative Analyst, Google
NPSMA Encourages PSM Program Directors to Submit Their Promotional Material

The NPSMA is compiling promotional material from all existing PSM degree programs. The NPSMA is using this material to create a master presentation about PSM degree offerings to be used at career fairs, tradeshows, and to be posted at the NPSMA office.

Also, the NPSMA hopes to be able to have enough examples on hand that information may be sent directly to prospective students who contact the NPSMA office about PSM degrees and their possible choices.

If interested, please ship 25 copies of your flyers to: NPSMA, 100 Institute Road, Worcester, MA 01609. If you would like to submit your material electronically, you may send it to slemire@npsma.org.

House Celebrates Women Scientists, Technologists, Engineers, and Mathematicians

On June 4, the House approved, by voice vote, a resolution (H. Res. 1180) recognizing the efforts of outstanding women scientists, technologists, engineers, and mathematicians in the United States and around the world.

Sponsored by Rep. Dave Reichert (R-WA), the resolution contains a number of findings, including:

- women have been vitally important to the fields of science, technology, engineering, and mathematics, and have transformed the world and enhanced and improved the quality of life around the globe;
- the contributions of women and mothers are central to progress and to the development of knowledge in many areas, including chemistry, physics, biology, geology, engineering, mathematics, and astronomy, and these contributions boost economic growth, create new jobs, and improve our knowledge and standard of living;
- in order to ensure our nation’s global competitiveness, our schools must continue to cultivate female scientists, technologists, engineers, and mathematicians from every background and neighborhood in our society to create the innovations of tomorrow that will keep our nation strong;
- and a disproportionately low number of female students are pursuing careers in science, technology, engineering, and mathematics, and it is crucial that we focus attention on increasing the participation of women.
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