

University of Massachusetts System-wide Implementation of PSM Programs

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Professional Science Master's Programs at the University of Massachusetts

The University of Massachusetts has provided high quality educational opportunities for students and faculty from Massachusetts and around the world for more than 180 years. The University's mission is to provide an affordable, accessible education of high quality and to conduct programs of research and public service that advance knowledge and improve the lives of the people of the Commonwealth, the nation, and the world.

The UMass system is composed of campuses in Amherst, Boston, Dartmouth, Lowell, the UMass Medical School in Worcester, and our award-winning distance learning division, UMassOnline.

The University of Massachusetts campuses are accredited by the New England Association of Schools and Colleges, which includes schools in the six New England states. Membership in the Association indicates that the institution has been carefully evaluated and found to meet standards agreed upon by qualified educators. Many of each campus' schools and colleges are also accredited by discipline-specific agencies.

University of Massachusetts
Amherst • Boston • Dartmouth • Lowell • Worcester

Collaborative Development of The UMass Professional Science Master's Initiative

Feasibility Phase: January – June 2009

- Gain support from administrative leadership
- Form planning committee (representatives from each campus)
- Survey the workplace
 - analyze economic trends
 - project life sciences and environmental sciences as major fields for future economic growth
 - determine students' training needs
 - Document employer interest
- Determine potential student interest
- Draft proposals for funding

Planning Phase: July-December 2009

- Appoint planning coordinator
- Clarify role of planning committee
- Assemble program development team
 - Four Industry
 - Employers
 - Industry advisory boards
 - Industry mentors
 - University of Massachusetts
 - Faculty
 - Researchers
 - Administrators
- Develop Program Standards
 - Match the program to the emerging needs in the marketplace.
 - Match the highest centers for academic excellence and accreditation.
 - Provide students with the tools to advance their careers.
 - Diversity and maintain mentoring relationships to monitor and ensure student progress.
- Develop Quality Control
 - Establish guidelines for consistent program elements across the system.
 - Establish student evaluations.
 - Establish schedule of program review by industry leaders.
 - Assess program outcomes.
- Identify initial program offerings
 - Align with UMass programs (Interchange Master's Degree Program and Graduate Certificate Program)
 - Develop New Business and Communication Courses (RPLS Courses) and Internships
- Engage employers in program advisory roles.
- Obtain program approvals
- Advertise new programs

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Collaborative Development of The UMass Professional Science Master's Initiative

Pilot Phase: January – June 2010

Enroll students in Professional Science Master's Degrees January 2010

University of Massachusetts	Professional Science Master's Programs
All campuses	MS Marine Science Central and Ocean Administration, Science and Technology
Boston	MS Environmental Science
Lowell	MS Biology Applied Biotechnology Bioremediation Environmental Biotechnology Project Management for Life Sciences

Program Rollout and Operations Phase: July – December 2010

Launch Additional PSM Program Offerings

All campuses	MS Biomedical Engineering and Biotechnology
Amherst	MS Wildlife and Fisheries Conservation
Boston	MS Biotechnology MS Applied Physics MS Geographical Information Systems
Dartmouth	MS Marine Biology MS Medical Lab Science
Lowell	MS Clinical Lab Science MS Biotechnology MS Forensic Chemistry
	MS Health Physics MS Radiological Science MS Industrial Mathematics

- Obtain Council of Graduate Schools PSM recognition
- Expand offering of online PLED courses.
- Establish Professional Science Master's student community (speaker notes, recreational activities, shared learning experiences)
- Establish system-wide PSM advisory board and PSM campus advisory boards
- Evaluate for future planning and to establish program sustainability guidelines

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Consistent with recent developments in graduate education, the University of Massachusetts is now

implementing innovative, system-wide Professional Science Master's (PSM) Degree Programs. The aim is to combine academic training in science and related disciplines with applied "cross-training" in business and communications such that the graduates are especially well prepared for current and future professional career opportunities. Representatives from the five UMass campuses and the President's office have conducted preliminary planning to accomplish several goals, including: become informed about PSM programs at other universities, generate faculty interest on each campus, confirm employer demand and support,

clarify prospective student interest, and meet requirements of the university's program approval process.

Concurrently, the Commonwealth of Massachusetts has analyzed economic trends and projected the life sciences and environmental sciences as major fields for future economic growth. Since substantial numbers of University of Massachusetts faculty have expertise in these disciplines, and since these industries comprise two of the strongest sectors in the current economic crisis, "Emerging Life Sciences and Environmental Sciences" is a natural choice for a unifying theme for PSM programs in Massachusetts.

With the five UMass campuses separated by one to two hours of driving time, and public transportation not an option, it is unrealistic for students or faculty to travel between campuses for course sharing. However, each campus has the capability to offer core science courses. In addition, UMass has extensive experience with online course sharing through its award winning UMass Online program. The expectation for PSM programs is to offer science courses on each campus and pertinent management courses for online delivery.

Students may currently enroll in six programs: Applied Biotechnology; Biosafety; Environmental Biotechnology; Project Management for Life Sciences; Environmental, Earth and Ocean Sciences; and Marine Science. Formative evaluations and market research are being conducted by the University's Donahue Institute.

A poster display will depict the timeline of our progress and plans.