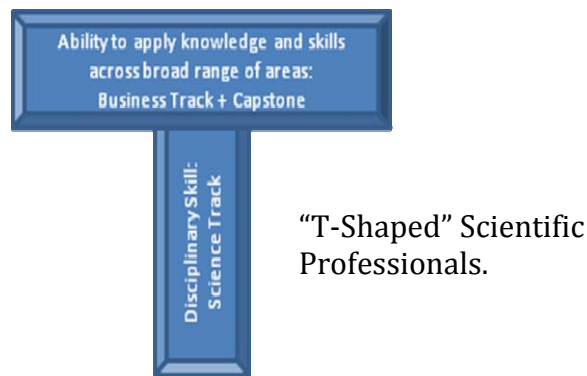


Rutgers, The State University of New Jersey
Professional Science Master's Program
New Degree -- Master of Business & Science - MBS

PSM Proposal Overview

There is a new degree being developed at Rutgers, The State University of New Jersey. This new degree will be called Master of Business & Science (abbreviation: MBS). The Master of Business and Science is part of a nation-wide trend in *professional science master's* programs. Today, more than 100 such programs exist across the US, almost all created in the last decade. These programs create scientific professionals and leaders with the capabilities needed to succeed in the global economy. Today, U.S. businesses need “T-shaped” professionals: workers who not only possess up-to-date knowledge in their fields, but also have multidisciplinary entrepreneurial skills that can translate scientific and technical knowledge into profitable products and services. Such professionals understand the linkage between technology and business, know how to lead innovations from idea to commercialization, are aware of market and customer needs, are familiar with financial decisions, and have developed leadership and team-building skills (see figure below). The *America Competes Act* and a recent National Research Council report have both recommended that four-year research universities invest to significantly expand the number of professional science masters' programs offered at their institutions.



The new Rutgers program is based on integrating tracks in science and engineering with a business component – combining parts of an M.S. degree with parts of an MBA. A university-wide system based on a simple and modular framework allows the immediate participation of all schools by taking advantage of the breadth and depth of Rutgers faculty scholarship. This new program involves all three campuses, Newark, New Brunswick and Camden, as well as many different schools and divisions, including: School of Arts and Sciences, School of Environmental and Biological Sciences, School of Engineering, Rutgers Business School, Ernest Mario School of Pharmacy, School of Management and Labor Relations, Edward J. Bloustein School of Planning and Public Policy, School of Communication, Information, and Library Studies, the Colleges of Arts and Sciences in Newark and Camden, UMDNJ and The School of Public Health, the Office of Continuing Education and Outreach, and the Graduate Schools of all three campuses. With this program, Rutgers is contributing to keeping New Jersey a high-tech industrial leader at the cutting edge of technology training and innovation. The PSM Program also prepares the state for continuing to lead one of the world's most diverse work forces.

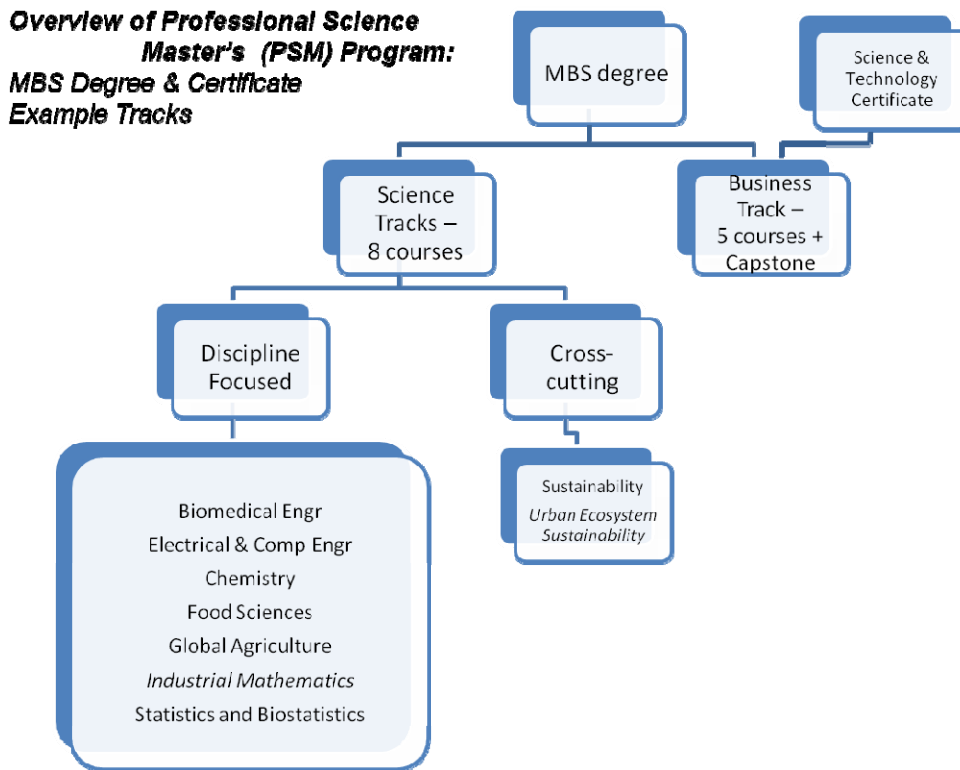
The Program

The Rutgers MBS consists of a total of 43 credits with up to 24 credits in the sciences and/or engineering, 15 credits in business and management of science and technology, and 4 credits for integrated coursework, including a capstone course and a lecture series in ethics and professionalism.

The science courses are concentrated in a particular discipline, and the degree will read “MBS with a concentration in XX”. There are two types of science tracks, one type resides in a particular graduate program/department or school. It is in a more traditional field, such as biomedical engineering, electrical engineering, chemistry, etc. The second type of science track is more cross-cutting and is a collection of courses from different schools and departments. This type of track is in newer and applied or professional scientific disciplines such as biotechnology, sustainability, energy, industrial mathematics, drug development, information technologies, etc. We expect new courses to be created for many of these tracks to respond to the needs from industry.

The business track consists of courses in financial management, marketing for sciences and technology, communication and leadership, management of science/technology, a management elective, and a colloquium on ethics and professionalism. The final course is a capstone course that focuses on entrepreneurship and intrapreneurship – understanding intellectual property, evaluating a new technology, and writing a business plan. In addition to the MBS degree, the business sequence (19 credits) is available as a stand-alone certificate for Ph.D. students.

A current overview of the PSM program is shown below. As the program goes through the approval process, we expect more scientific tracks to be proposed. New tracks are created by departments/faculties/centers and go through the graduate school for approval.



Background & Funding

Rutgers began investing in the development of this program over two years ago when Professor David Finegold, was hired to become Dean of the School of Management and Labor Relations (SMLR) from the Keck Graduate Institute, a pioneer in the national PSM movement. Dr. Finegold, with the cooperation of the university deans, formed a Steering Committee and secured an Academic Excellence grant from the University to begin planning the program. Subsequently, they have obtained over \$1M in external grants from the Sloan Foundation, New Jersey Department of Labor, the U.S. Department of Education (FIPSE), and the U.S. Department of Labor (WIRED Bio-1) to support the development of a new MBS degree framework. The director of the PSM program is Dr. Deborah Silver. The objective is to make Rutgers a global leader in PSM education, by creating a unified state-wide system that will enable the program to be launched simultaneously across the university and in multiple disciplines.

Approval Process

The Rutgers PSM Program is now undergoing the approval process. The scientific tracks which are currently completed and that have been submitted with the MBS degree proposal include:

Disciplinary Tracks:

- Biomedical Engineering
- Chemistry
- Electrical and Computer Engineering
- Food Sciences
- Global Agriculture
- *Industrial mathematics (Camden)*
- Statistics
- *Urban Environmental Analysis and Management (Newark)*

Cross-cutting tracks:

- Sustainability
- *Urban Ecosystem Sustainability (Newark)*

Other tracks are in development, and we expect to have them completed very soon. They will most likely be approved through the graduate school approval process. We anticipate offering the MBS degree in 2010. For further information, please visit our website at <http://psm.rutgers.edu> .

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