Professional Science Masters (PSM) in Business Biotechnology

The Professional Science Masters (PSM) is intended as a terminal degree for students interested in entering the workforce following completion of the degree. The program is tailored for the student with undergraduate training in biology or chemistry who is primarily interested in working in the business-side of the emerging biotechnology industry. The program includes traditional classroom courses in both business and science that culminates in two internship experiences. One internship provides experience working side-by-side with a research scientist. The second internship exposes the student to the business-side of the biotechnology industry. Employment opportunities are very encouraging. For PSM graduates in 2006, 70% found employment at highly competitive salaries in business, government or not-for-profit companies before or shortly after graduation (Nature 2008 455:704).

Admission requirements

1. Baccalaureate degree in biology or chemistry. Degrees in other scientific areas can be considered on an individual basis.
2. Graduating undergraduate science GPA of 3.2 or higher
3. Minimum of 1,000 on GRE
4. Personal statement of career goals and how the applicant feels this training will help achieve those goals.
5. Three letters of recommendation with at least one from a former professor

Degree Requirements

The program requires a total of 34 credits.

Core curriculum (10 credits)

Biotechnology Business Development (ENT 6188) course
Venture Creation (ENT 6016)
Two 2-credit internships (see below for more details)

Science Courses (15 credits)

The science courses are electives and their selection will vary depending on student demand, resources, faculty and new courses being developed. The following is a list of courses that would be appropriate for a student in this program. Other courses can be substituted with the approval of the faculty advisor.

Advanced Biochemistry (BCH 6740)
Advanced Cell Physiology (PCB 6207)
Advanced Immunology (PCB 6236)
Biochemistry of the Gene (BCH 5415)
Bioinformatics (BSC 6458C)
Cellular Neuroscience and Disease (PCB 6849)
Developmental Neurobiology (PSB 5515)
Macromolecular Structure and Function (PCB 6933)
Principles of Neuroscience (PSB 6037)
Protein Misfolding and Disease (PCB 6933)
Reproductive Endocrinology (PCB 6804)
RNA Biology and Disease (PCB 6525)

Business Courses (9 credits)
Select three of the following four courses
Seminar in Entrepreneurship/Venture Management (MAN 6875)
Technology Commercialization Strategies (ENT 6186)
Developing and Marketing Innovation (MAR 6837)
Financial Accounting Concepts (ACG 6027)

Two Internships (4 credits)
Each of the two 2-credit internships will last one semester. One internship will be science oriented with the student working directly with research scientists. The second will involve working on the business and administrative side of the company or institute including technology transfer and business development offices. The goal is to place students in one of the biomedical institutes (e.g. Scripps Florida and the Max Plank Institute) or an emerging biotechnology business.

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