PROFESSIONAL SCIENCE MASTER’S PROGRAM IN BIOMEDICAL SCIENCES

PROGRAM GOALS

The PSM in Biomedical Sciences program offers rigorous advanced academic training and professional practical skills in order to prepare students for challenging careers in the biomedical sciences and health sciences. The program strives to provide strong scientific knowledge and promote global-awareness, ethics, communication and other important professional skills through acquiring understanding within and across disciplines at DU. Furthermore, the students will gain awareness of the many issues, concerns, and future directions of allied health and biomedical sciences industries. Thus, the program will provide graduates with strong technical aptitude, professional competencies, interdisciplinary attitudes, globally-oriented prospective, and maturity.

PROFESSIONAL SCIENCE MASTER’S DEGREE

The PSM degree is a distinctive advanced degree for those intending to pursue a career in the practice of science; it differs from a coursework-only Master’s degree and a research-based Master’s degree. The NPSMA guidelines state that PSM programs achieve their objectives ‘by combining advanced, graduate coursework in science and/or mathematics with an appropriate component of professional skills development and by including an experiential learning component appropriate to the targeted employment sector.’ The professional skills components of the PSM program may include business basics, policy, law, regulatory affairs, finance, organizational behavior, ethics, communication, and teamwork (as defined by the NPSMA). In addition, the experiential learning component provides an opportunity for students to demonstrate proficiency in written and oral communication skills.

PSM IN BIOMEDICAL SCIENCES PROGRAM AT DU

The Professional Science Master of Biomedical Sciences degree is a rigorous one-year academic program. This master’s degree requires 45-credit hours of course work and successful completion of the written and oral defense of a capstone project. The curriculum includes 24 credit hours of required core courses and 21 credit hours of concentration-focused elective courses. The program director will meet individually with students to create and approve an individual plan of study.

This program will serve students for whom a traditional research-based Master’s degree may not be an appropriate option to advance their career endeavors or interests. Graduates from this program may enter careers in biomedical research in academia or industry, clinical research, regulatory affairs, government, or healthcare through further education in professional schools. The PSM program will function as an important bridge for students between undergraduate education and careers in health and biomedical sciences.

CAPSTONE EXPERIENCE

The capstone experience will include an externship project and a scholarly presentation of that project. The capstone project can be one that is administrative, clinical, programmatic, or research focused. Students will work with a professional from healthcare, pharmaceutical and biotech companies, or private and public health services to identify the student’s specific project focus. Through the capstone experience, students will (1) gain mastery in the biomedical field by critiquing current research literature related to a specific problem or scientific question, (2) gain advanced disciplinary knowledge and professional skills by applying the appropriate modes of inquiry, research and professional skills to examine and solve a current specific problem or concern in the field of biomedical sciences, (3) integrate information across relevant disciplines in order to solve complex problems, and (4) compose an original scholarly presentation (both written and oral) that reflects a topic of current interest in the biomedical and healthcare industries, and the integration of science with strong professional skills.

PSM PROFESSIONAL ADVISORY BOARD

The program strives for active communication with several professionals outside of DU in biomedical sciences to ensure the curriculum and capstone experiences remains relevant and beneficial to both the students and the industries. The Advisory Board is comprised of 8-12 leaders in biomedical research, biotechnology, clinical healthcare, academic allied health institutions, and hospital administration. The Advisory Board guides the curriculum by providing input regarding the academic skill set and professional tools most sought by people hiring graduates for biomedical careers in industry or academia and for admission to professional schools.

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