The Graduate Certificate in Nanomedicine is designed for scientists, engineers, and physicians to develop competency and practical skills in the application of nanotechnology to problems in medicine. This program is appropriate for those working in or seeking careers in biotechnology, pharmaceutical, biomedical, or clinical fields. Program participants receive advanced training in the fundamental and applied aspects of nanomedicine, as well as nanomedicine commercialization from bench to bedside. The curriculum includes a variety of activities for scientific and professional development, including lectures, case studies, journal readings, term projects, and close interactions with distinguished faculty and experts drawn from academia, hospitals, industry, and government.

The certificate consists of five nanomedicine (NNMD) courses, totaling 12 semester-hour credits. This is a part-time, 12-credit graduate program that can be completed in as little as two semesters.

**Program Requirements**

Complete all requirements listed below unless otherwise indicated.

**Requirements**

**Core Courses**

| NNMD 5270 | Introduction to Nanomedicine Science and Technology | 3 |
| NNMD 5272 | Nanomedicine General Seminar | 1 |
| NNMD 5274 | Nanomedicine Advanced Seminar | 1 |
| NNMD 5370 | Nanomedicine Research Techniques | 4 |
| NNMD 5470 | Nano- and Biomedical Commercialization: From Concept to Market | 3 |

**Electives**

Students may apply 4 semester hours of elective credit to substitute for NNMD 5370.

- BIOL 5307 Biological Electron Microscopy
- BIOT 5700 Molecular Interactions of Proteins in Biopharmaceutical Formulations
- CHEM 7247 Advances in Nanomaterials
- CHME 7350 Transport Phenomena
- ENGR 6150 Nanotechnology in Engineering
- PHSC 6210 Drug Design, Evaluation, and Development
- PHSC 6216 Human Physiology and Pathophysiology
- PHSC 6226 Imaging in Medicine and Drug Discovery
- PHSC 6290 Biophysical Methods in Drug Discovery
- PHYS 5260 Introduction to Nanoscience and Nanotechnology
- PHYS 7731 Biological Physics 1
- PMST 6252 Pharmacokinetics and Drug Metabolism
- PMST 6254 Advanced Drug Delivery System
- POLS 7333 Science, Technology, and Public Policy

**Program Credit/GPA Requirements**

12 total semester hours required
Minimum 3.000 GPA required