

New!

Nanotechnology Minor



The Nanotechnology Minor comprises both fundamental and specialized coursework preparation for undergraduate students who are interested in nanoscale research and/or who wish to pursue a career in nanotechnology.

Requirements: 18 credit hours of core and elective coursework

➤ **Core courses (total = 9 credit hours)**

- CHY 477 / ECE 457 : Nanoscience, 3 credits
- PHY 236 or CHE 420, 3 credits
- Undergraduate Research (INT 398 or HON 398), 3 credits

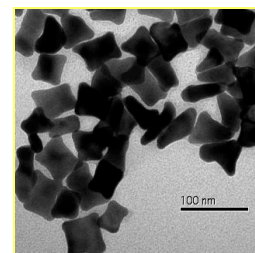
The undergraduate research project must pertain to nanoscale science or engineering. A research proposal must be submitted to the academic advisor for the minor for review and be approved for acceptance of fulfillment of this requirement for the minor.



A student may choose either PHY236 or CHE 420 to fulfill the core course requirements for this minor. The choice will likely depend on the student's major, research project and/or interests. PHY 236 is excellent preparation for all students who are interested in nanotechnology, but is especially relevant for those who are interested in nanoscale electronic materials and devices. Students who are interested in nanoparticle synthesis and bio or chemical properties are recommended to take CHE 420. These courses are also on the list of elective courses. A student may take both courses, applying one towards fulfilling the core course requirements and the other towards fulfilling the elective course requirements.

➤ **Elective Courses (total ≥ 9 credits) selected from the list below:**

Course	Credits	Title
GEE 298/398	3	Intro to Nanoscale Science and Engineering
PHY 236	3	Intro Quantum Physics
PHY 447	3	Molecular Biophysics
PHY 469	3	Quantum and Atomic Physics
EES 324	3	Environmental Protection Law and Policy
BLE 402	3	Biomaterials and the Cellular Interface
ECE 464	3	Microelectronics Science and Engineering
ECE 462	3	Introduction to Basic Semiconductor Devices
MEE 320	3	Materials Engineering and Science
MEE 450	3	Intro to Mechanics of Composite Materials
MEE 555	3	Smart Materials
MEE 556	3	Intro to Tissue Engineering
CHE 420	3	Colloid Technology
CHE 410	3	Advanced Materials
CHB 460	3	Biochemical Engineering
CIE 543	3	Intro to Composite Materials



http://catalog.umaine.edu/preview_program.php?catoid=58&poid=7420&returnto=1468

Minor Coordinator:



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