Nanotechnology Studies (NTS)

Interdisciplinary Minor in Nanotechnology Studies

College of Engineering and Applied Sciences

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The minor in Nanotechnology Studies (NTS) is an interdisciplinary, research-intensive program intended for students in majors from the College of Engineering and Applied Sciences or the College of Arts and Sciences who wish to learn about the emerging field of nanotechnology. The coursework in the minor will provide a broad background in the science, design, manufacture, and societal, health, and environmental impacts of nanomaterials and nanoscale structures and their applications in engineering and health related areas. The inclusion of a minimum of two semesters of research in the students' own major areas, as well as choice of technical electives, will allow for integration into current interests and disciplines, and will provide knowledge and skills valuable to students planning to seek employment or graduate studies in fields related to the engineering, business, policy or the broader impact of nanotechnology.

Admittance to the minor requires the approval of the NTS faculty committee, following review of student performance in the 213 class and other relevant coursework.

Requirements for the Minor in Nanotechnology Studies (NTS)

All courses for the minor must be passed with an average grade of B or higher.

Completion of the minor requires 18-22 credits and consists of the following requirements:

1. BME 213 or ESM 213 or EST 213 or MEC 213
2. Two semesters (at least 6 credits) of independent research (499 or 488), co-advised by a faculty members from the student's major program and a second faculty advisor from the NTS faculty committee. Research topics must be approved by both faculty advisors for courses to be accepted to the NTS minor.
3. Two technical electives, chosen from among the following courses:
   a. BME 381 Nanofabrication in Biomedical Applications
   b. ESG 339 Thin Film Processing of Advanced Materials
   c. PHY 472 Solid State Physics
   d. ESE 231 Introduction to Semiconductor Devices
   e. CHE/ESM 378 Materials Chemistry
   f. MEC 470 Introduction to Tribology
   g. EST 391 Technology Assessment
   h. Another upper division technical course with permission of the NTS faculty committee
4. BME 400 or ESM 400 or EST 400 or MEC 400