

NANOSCIENCE TECHNOLOGY

Delivery: Daytime Program
 Start: Fall Semester, Full- or Part-Time
 Location: Rosemount Campus (Semester 1-3)
 University of Minnesota (Capstone Semester 4)

Outcomes

Nanoscience Technology A.A.S. Degree 72 credits

Major Description

This program prepares students for careers in the nanobiotech, nanomaterials and nanoelectronics industries. Offered through a partnership with the University of Minnesota, the program gives graduates the skills and knowledge to land jobs in companies and corporations applying nanotechnology to product development, testing, research and development, and manufacturing design.

Work Environment

Nanoscience technicians work in research, production, marketing and business environments where nanoscale is integral to the industry. The U.S. nanotech market is expected to mushroom to \$1 trillion by 2012.

Potential Job Titles

- Nanotechnologist
- Nanoscience Technician
- Nanoelectronics Expert
- Nanobiotech Researcher
- Nanoscale Fabrication Technician
- Nanomaterials Research Associate

Salary Data *(Small Times survey)*

- Average Salary (Global): \$42,662/year

NANOSCIENCE TECHNOLOGY – A.A.S. DEGREE

Fall Semester – First Year

Course#	Course Title	Credits
NANO1100	Fundamentals of Nanoscience I	3
PHYS1100	College Physics I	4
BIOL1500	General Biology	4
COML1400	Introduction to Computers	3
MATS1300	College Algebra	4
Total Credits		18

Spring Semester – First Year

Course#	Course Title	Credits
NANO1200	Fundamentals of Nanoscience II	3
NANO1210	Computer Simulation	1
CHEM1500	Introduction to Chemistry	4
MATS1251	Statistics	4
PHYS1200	College Physics II	4
SPEE1020	Interpersonal Communication	3
Total Credits		19

Fall Semester – Second Year

Course#	Course Title	Credits
NANO2101	Nanoelectronics	3
NANO2111	Nanobiotechnology/Agriculture	3
NANO2121	Nanomaterials	3
NANO2131	Manufacturing Quality Assurance	2
NANO2140	Interdisciplinary Lab	3
NANO2151	Career Planning and Industry Tours	1
ENGL1100	Writing and Research Skills	3
Total Credits		18

Spring Semester – Second Year

Course#	Course Title	Credits
Capstone at the University of Minnesota		
MT 3111	Elements of Microelectronic Manufacturing	3
MT 3112	Elements of Micro & Nano Manufacturing Lab	1
MT 3121	Thin Films Deposition	3
MT 3131	Introduction to Materials Characterization	3
MT 3132	Materials Characterization Laboratory	1
MT 3141	Principles & Applications of Bionanotechnology	3
MT 3142	Nanoparticles and Biotechnology Laboratory	1
NANO2970	Industry Internship & Observation	2
Total Credits		17

TOTAL PROGRAM REQUIREMENTS 72

*This is a sample course sequence resulting in an A.A.S. degree.
 Please consult your program advisor regarding your academic plans.*