

SAAST at Penn

Summer Academy in Applied Science and Technology

Nanotechnology 2011

Welcome to University of Pennsylvania's SAAST Nanotech Program!

Nanotechnology, shortened to "**Nanotech**", is the study of the control of matter on an atomic and molecular scale. Generally, nanotechnology deals with structures of the size 100 nanometers or smaller, and involves developing materials or devices within that size. There has been much debate on the future of implications of nanotechnology. Nanotechnology has the potential to create many new materials and devices with wide-ranging applications, such as in medicine, electronics, and energy production. On the other hand, nanotechnology raises many of the same issues as with any introduction of new technology, including concerns about the toxicity and environmental impact of nanomaterials.

Class time and dates

July 11th ~ July 29th, Monday through Friday, 9am – 5pm.

Location

Lectures – Berger Auditorium (Basement of Skirkanich Hall)

Labs – Skirkanich 225

Content

This class will focus on the atomic and molecular structure and other concepts necessary to understanding why very small systems exhibit unique behavior. We will also explore various applications. Through lecture, class discussion, and labs, we will cover topics in nanomaterials, nanofabrication techniques, imaging nanostructures, real-life applications of nanotechnology, and nanoscience ethics.

Contacts

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Grading

Homework	20%
Labs	10%
Quizzes	25%

Presentations	10%
Final Project	35%