IGERT

INTEGRATIVE GRADUATE EDUCATION AND RESEARCH TRAINEESHIP

Soft Interfaces IGERT @ SYRACUSE UNIVERSITY

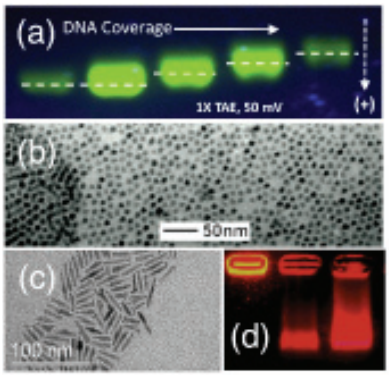
An interdisciplinary graduate program to train PhD scientists and engineers in the areas of biological membranes, biomaterials and nanostructured interfaces.

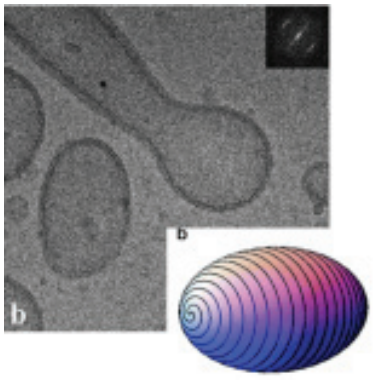
Eligibility:

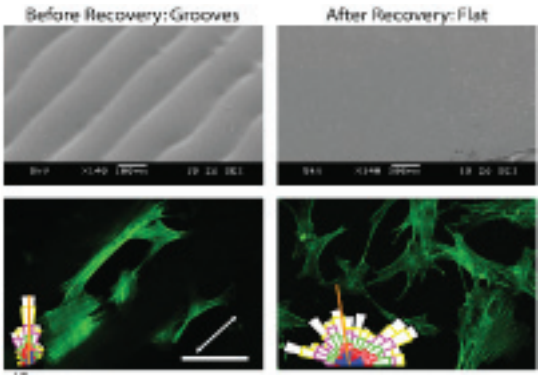
- Must be US citizen or permanent resident
- Must apply and be accepted into one of the following five doctoral programs at SU:
  - Physics
  - Bioengineering
  - Chemistry
  - Biology
  - Chemical Engineering

Key Elements:

- a stipend of $30k/year for the first two years; RA support after that
- an interdisciplinary, flexible course curriculum
- early engagement in research
- emphasis on developing skills for collaborative research and science communication
- scientists and engineers work alongside on collaborative projects







For more information and to apply, visit http://soft-igert.syr.edu

Highlights of Educational Program

The IGERT program at Syracuse University prepares students for interdisciplinary research in the broad area of biological membranes, biomaterials, and nanostructured interfaces. Students earn a PhD in Bioengineering, Biology, Chemical Engineering, Chemistry, or Physics. An IGERT fellowship supports two years of graduate studies. It is expected that the student will be subsequently supported primarily by a research assistantship.

The educational program during the first two years provides a strong background in the disciplinary emphasis chosen by the student, complemented by interdisciplinary courses and courses on science policy and communications. This program is summarized in the following table, with IGERT courses italicized.

Fall (Year 1)	**Spring (Year 1)**	**Summer (Year 1)**
1-3 courses in home Department	1-2 courses in home Department	Research or Internship
Physical Cell Biology BEN/BIO/CEN/CHE/PHY 635	*Science, Technology, and Public Policy* PAI 772	*Communicating Science* COM 600 (Summer 1)
Lab Experience	*Open Problems in Soft Interfaces* BEN/BIO/CEN/CHE/PHY 638	

Fall (Year 2)	**Spring (Year 2)**	**Summer (Year 2)**
Core &/or advanced course in home department or other participating department	Core and/or advanced course in home department or other participating department	Research or Internship
Ethical Issues in Engineering & Research BEN 600[#]	Special topic course	

Students will determine their optional and departmental courses with advice from their departmental and IGERT advisors. Here is a brief description of the IGERT courses (also open to non-IGERT students):

Physical Cell Biology – Students will learn about current advances in the quantitative understanding of cell biology including structure and dynamics of cell membranes and molecular motors, DNA replication and repair, and gene regulation.

Open Problems in Soft Interfaces – Participants will review current papers that they and the instructor suggest. Papers on biomaterial interfaces, soft condensed matter physics treatments of interfaces, techniques for patterning surfaces at the nanoscale, bacterial biofilm control, etc. will be critically analyzed through a team process. Teams will also prepare concrete research proposals.

Science, Technology, and Public Policy – This course, offered by the Maxwell School, will provide the students with a perspective on how science affects policy and how policy affects science, at a deep enough level that it may help guide their careers and promote positive involvement in policy.

Communicating Science – This five-week modular course in science, engineering and technology communications will emphasize the principles, practices, and process of public communication in the context of the public understanding of science. It will give practice in presentation and distribution of results and goals for intended audiences.

Ethical Issues in Engineering & Research – The course may be taken for 1-3 credit, depending on departmental requirement. A minimum of 1 credit is required by the IGERT program

For more information visit the Syracuse IGERT website at http://soft-igert.syr.edu

Contact: Ms. Erin Borchik, IGERT Program Coordinator at eborchik@syr.edu or 315-443-3467.