



DEPARTMENT SPOTLIGHT: **BIOENGINEERING**

When the Department of Bioengineering formed in 2003 it was envisioned as a collaboration among scientists, engineers and physicians. But one question lingered: In what school should Stanford's newest department reside, the School of Engineering or the School of Medicine? So, the deans of the two world-renowned schools did what reasonable people do—they shared.

Bioengineers are a new class of scientists who use the tools and the know-how of engineering to solve medical problems and design solutions to disease, abnormalities and injury. Bioengineers apply biology, chemistry and physics to study biological systems—to measure, analyze, fabricate and control these systems—in ways never before imagined.

Bioengineers have moved us to the cusp of a new era of significant advances in human health based on engineering biology to build new molecules, cells and tissues. Entire new industries will develop from the field and the changes will be similar in scale and scope to those wrought by the information technology revolution.

The Common Thread: Stanford

That much of this is happening at Stanford University is no coincidence. The Department of Bioengineering has the enviable opportunity to leverage the depth and breadth of Stanford University's knowledge and the might of Silicon Valley's high-tech communities.

Here, the next big breakthroughs are literally just around the corner. The proximity of Stanford's exceptional schools of engineering and medicine, located just steps from one another, is a rarity among the nation's

top universities. Such proximity makes it possible for students to attend hospital rounds, take engineering classes, conduct research in bioscience labs, and work side-by-side with students and faculty in other disciplines in the course of a given day.

The nearness of Silicon Valley and its remarkable entrepreneurial spirit, business acumen and its funding sources provide a further—many say unbeatable—edge to the researchers of Stanford Bioengineering.

Building Excellence

The department has quickly risen in the rankings and it now figures among the top ten such programs in the country. The department is training engineers and biomedical scientists at all levels—undergraduate and graduate students, and post-doctoral fellows.

The undergraduate program, launched only in 2010, provides an opportunity to develop an entirely new curriculum that takes advantage of the strengths of the schools of engineering, humanities and sciences, and medicine to attract and educate a new generation of exceptional students just beginning to chart their careers.

Below: An artist rendering of the new Bioengineering and Chemical Engineering Building that will open in 2014.



TRANSFORMING HUMAN HEALTH

Video: Listen to bioengineers describe their work and what makes Stanford such a special place.






To watch the video, scan the QR code or go to <http://bit.ly/uCJpNz>



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When complete the Bioengineering and Chemical Engineering Building will be a state-of-the-art center for interdisciplinary collaboration.