ACCELERATING BIOMEDICAL TECHNOLOGY INNOVATION: THE ROLE OF EDUCATION

Innovation is a process. As such, innovation can be intellectualized and taught. The educational program at Stanford is underpinned by cognitive science; see, “Preparing People for Rapidly Changing Environments”, John Bransford, J. Engr. Edu., 2007. Initiated in 2001, the mission of the Innovation Fellowship in the Biodesign Program (http://innovation.stanford.edu/jsp/program/about.jsp) is to train tomorrow’s leaders in medical technology innovation by teaching the process of technology innovation - defined as the creation of effective solutions to clinical needs. The elements of the year-long program include: (1) interdisciplinary, 4-person, team-based learning combining pre- and postdoctoral engineering, medical and business trainees; (2) intensive exposure to medical needs finding (unsolved clinical problems), characterization (including an immersive experience in the hospital and clinic) and validation; (3) hands-on process of invention, prototyping and early stage testing; (4) making use of the substantive readily available educational resources, including patenting, regulatory and reimbursement issues; and (5) mentoring the teams by experienced technology innovators, including Stanford faculty as well as a wide range of experts from different aspects of the “real-world” medical technology industry. The fellows also are involved with a 2-quarter Biodesign Innovation course that engages engineering, medical and business students in the innovation process.

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Presented by:

DEPARTMENT OF
BIOMEDICAL ENGINEERING