

MU Biodesign and Innovation Program



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MUBIP Mission

To improve patient care through interdisciplinary research, development and commercialization of new medical technologies. This high-profile program is dedicated to the comprehensive education of medical, engineering and business fellows. Additionally, the MUBIP will encourage and be dependent upon improving collaborative investigational and commercialization efforts throughout the University, the state of Missouri and nationwide. The long term success will ultimately result in a sustainable, commercial success for The University of Missouri.

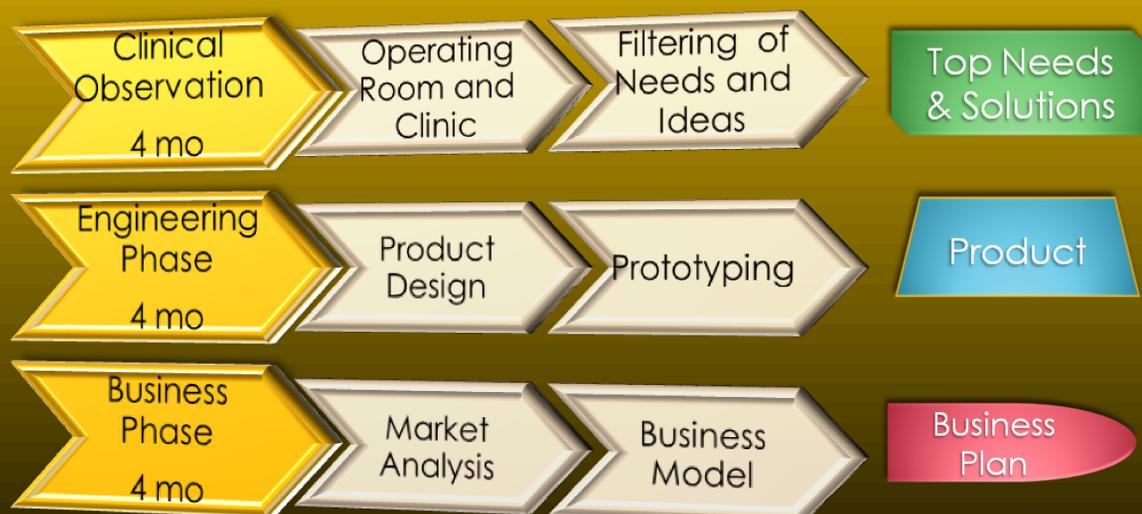
Introduction

The MU Biodesign and Innovation Program (MUBIP) centers its efforts off two tiers: (1) formal educational training through a biodesign and innovation fellowship and (2) interdisciplinary faculty collaboration. The Department of Surgery and College of Engineering on the University of Missouri campus in Columbia recognizes the growing need to improve patient care and desire to impact this arena through the collaborative development of MUBIP. MUBIP goals are to successfully bring new medical technologies and health care solutions into the market while producing high quality innovative professionals with the desire and knowledge to continue producing new medical technologies within our program, the University of Missouri, MU Biodesign affiliates, corporations or through the establishment of new companies resulting in economic gains.

Formal Educational Training

The fellowship experience simulates, in a compressed one-year timeframe, the phases of a start-up medical device company. The fellowship consists of a three member team including a surgeon, engineering with at least a masters degree, and business professional with a MBA. The fellowship team start date is July 1 and ends June 30.

The fellowship year structure is divided into three phases that provide observation and hands-on experience in clinical, engineering and business environments. Phase 1 is clinical immersion; Phase 2 is engineering design and development; finishing with Phase 3, business practices. Each phase is approximately 4 months with overlap throughout the year. In addition to observation and hands-on training, the fellows attend lectures related to the biodesign process, surgery, engineering and business. Lectures are presented by faculty from the Department of Surgery, College of Engineering, entrepreneurs, angel fund investors, venture capitalists, industry leaders, founders from start-up companies, and other successful biodesign related individuals from the community and nationwide.



Interdisciplinary Faculty Collaborations

MUBIP focuses on facilitating collaboration between faculty within the University of Missouri Campus through interdisciplinary research and education. Through regular interdisciplinary faculty meetings, the MU Biodesign and Innovation Program supports existing collaborative relationships and encourages new relationships to improve patient care through innovative technology. Sometimes relationships form spontaneously; other times program leaders review the research areas of accomplished engineers and recommend a “match” with a skilled surgeon.



Features of MUBIP

- ◆ Fosters Interdisciplinary Research at Faculty Level
- ◆ Proximity Promotes Collaboration
 - ◆ Schools of Medicine, Engineering, Business, Law and Veterinary Medicine and large tertiary hospital all on 1 campus
- ◆ Assists in Undergraduate Capstone Course
- ◆ “Super” Second Year Fellow
 - ◆ Focused on Commercialization and Product Development



Conclusion

MU Biodesign & Innovation Program is a new innovative way to grow, build and promote development of medical technologies to improve patient care. The education is a novel way to help surgeons, engineers and business professionals learn the process from napkin to market and prepare them for a future in medical device development. This program has the ability to impact future patient care with a generation of knowledgeable successful inventors. Collaboration is a key factor to continue improving patient care; it is crucial to bring engineers and surgeons together to be leaders in today’s changing world.