

Curriculum

The curriculum of the Regenerative Sciences Ph.D. Program encompasses the spectrum of regenerative sciences — from discovery to application — and focuses on providing students with understanding that spans traditional academic disciplines. The program provides innovative education experiences to produce the expert scientists needed to create the next generation of regenerative diagnostic and therapeutic solutions.

Students in the Regenerative Sciences Ph.D. Program will take coursework including:

- REGS 5200 Regenerative Medicine and Surgery
- REGS 5300 Stem Cells and Development
- REGS 5500 Topics in Regenerative Sciences and Medicine
- MPET 6820 Regenerative Medicine Principles to Practice
- CTSC 5210 Ethics in Regenerative Medicine
- REGS Advanced Topics in Stem Cell Biology
- REGS Nanomedicine
- REGS Manufacturing
- REGS Data Science
- REGS Cellular Engineering
- REGS Tissue Engineering
- REGS Biomaterials and Scaffold Design
- REGS Entrepreneurial Pathways

Educational domains are tailored to develop students' understanding and skills in regenerative technology and its applications. Innovative educational activities develop students' comprehension of advanced regenerative technologies and provide transdisciplinary knowledge.

The curriculum is further enriched by education in the development, regulation, business application and ethical considerations relevant to regenerative medicine solutions.

- Course integration with other disciplines:
 - BMB 5400 Independent Study in Development Biology
 - CORE 6050 Critical Thinking and Scientific Writing
 - CORE 6510 Molecular Mechanisms of Human Disease
 - CTSC 5020 Regulatory Issues in Clinical Research
 - CTSC 5025 Introduction to Regulatory Science
 - CTSC 5035 Case Studies in Regulatory Science
 - CTSC 5260 Methods and Foundations in Biomedical Ethics
 - CTSC 5600 Statistics in Clinical and Translational Research
 - CTSC 6150 Case Studies in Entrepreneurialism
 - IMM 6865 Regenerative T Cell Immunology in the Treatment of Cancer