Carnegie Mellon Biomedical Engineering

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What is Biomedical Engineering?

• Intersection of biology and medicine with “traditional” engineering disciplines
  • Mechanical Engineering
  • Electrical Engineering
  • Materials Science
  • Computer science
  • More…
Our Students Have Different Backgrounds

• Engineering
• Biological sciences
• Other sciences
• Mathematics
CMU Research Strengths

Biomaterials

Tissue/Organ Engineering

Cardiopulmonary Medical Devices

Neural Engineering

Medical Robotics

Biomedical Imaging
Course Focus Areas

• Physiology and Cellular/Molecular Biology
• Biomaterials and Tissue Engineering
• Biomechanics
• Biomedical Imaging and Bioinformatics
• Neuroengineering
Graduate Programs

• PhD
• MS
  • Practicum option (course-based)
  • Research option
  • Engineering & Technology Innovation Management (ETIM)
  • Technology Ventures (MSTV)
  • CS + BME Dual Masters
PhD Direct Entry Requirements

• ≈ 5 years
• 100% paid for (tuition & stipend)
• 7-9 formal classes
• Rest of time dedicated to research
Practicum Masters Requirements

• 9-16 months
• Tuition – fellowship are available (GEM)
• Course work
  • 7-9 formal classes
  • One project (clinical, research)
Joint Programs (ETIM, MSTV, CS + BME)

- 9 months of BME courses (7-9)

- One year of the additional program
  - Innovation management
  - Technology ventures
  - Computer science
Research Masters Requirements

• ≈ 21 months

• Tuition – fellowship are available (GEM)

• Course work
  • 6-8 formal classes
  • Remainder is research