

## Fields/Positions in Biomedical Engineering



- Field engineers
  - Technical support to medical professionals, assist with the implantation of medical device and support of those devices
  - *e.g. St. Jude Medical, Medtronic, Boston Scientific, Stryker*
- Product development
  - Designing, developing and testing new materials, devices and equipment
  - *e.g. Amendia, Edwards Lifesciences, Stryker*
- Process development
  - Devising new processes, or refining existing ones, to optimize the manufacturing process
  - *e.g. Baxter, Edwards Lifesciences, Kimberly-Clark, Johnson & Johnson, Abbott, Procter & Gamble*
- Consulting
  - Provide clients with technology and business process expertise they may lack to help them make decisions
  - *e.g. Bain, Deloitte, Clarkston, Kurt Salmon, Pinnacle AIS, IBM*
- Quality and regulatory affairs
  - Implement and maintain internal quality systems, support preparation of 510K applications, review of new product design, work closely with FDA
  - *e.g. CR Bard, St. Jude Medical*
- Technical sales
  - Determine how products could be designed or modified to meet customers' needs and advise customers on how best to use the products
  - *e.g. St. Jude Medical, Zimmer, Beckman Coulter*
- Health IT
  - Develop and build software that helps healthcare organizations provide better care
  - *e.g. Epic, McKesson, Meditech, Allscripts, Nuesoft*
- Government
  - Evaluate safety and effectiveness of medical devices, work with intellectual property, patents, research diseases
  - *e.g. US Patent & Trademark Office, FDA, CDC*

## Approximate Percentages

Industry	52
Grad school	27
Medical school	13
Other (teaching, ministry, etc.)	8

Some our biggest employers: St. Jude Medical, Epic, Medtronic, US Patent & Trademark Office, Edwards Lifesciences, CR Bard

**Examples of how the BMED curriculum directly prepares students for the “next-step” after graduation.**

- BMED 1300
  - Problem based learning (healthcare screening, medical device testing/experimental design, disease modeling)
  - Group work
  - Presentation skills
  - Decision making skills
- BMED 2300
  - Industrial design
  - CAD
  - Product development & prototyping
  - Group work
  - Presentation skills
  - Entrepreneurship
- BMED 2210
  - Chemical processes
  - Problem solving
  - Critical thinking
  - Groupwork