

BIOMEDICAL ENGINEERING

BIOMEDICAL ENGINEERING (BME) IS A YOUNG DEPARTMENT UNDERGOING RAPID GROWTH. IT LEVERAGES THE STRONG COLLABORATIVE, MULTIDISCIPLINARY CULTURE OF CARNEGIE MELLON UNIVERSITY TO PERFORM THE MISSION OF INTRODUCING A WIDE RANGE OF CUTTING-EDGE SCIENCE AND TECHNOLOGIES FOR THE IMPROVEMENT OF HUMAN HEALTH.

Biomedical Engineering Centers

Center for Bioimage Informatics
Center for the Mechanics and Engineering of Cellular Systems
Center for Complex Fluids Engineering

Fast Facts

- BME is offered as a unique additional major B.S. degree in combination with any traditional engineering B.S. degree
- Graduate student body has more than quadrupled since the program's creation; the number of undergraduate students grew 50 percent over the past five years
- Student body consists of 270 undergraduates; 66 master's students; 37 doctoral students
- 60 percent of undergraduates are female
- Department has 46 faculty members, affiliated with 11 departments in four colleges, consisting of 19 core and 27 affiliated members
- Over 50 percent of the core faculty hold 50/50 joint appointments; courtesy faculty outnumber core faculty to take advantage of broad interactions
- The Sherman and Joyce Bowie Scott Hall will be the new home for BME in 2016 and will provide 20,000 square feet of new lab space and offices.

SALARIES AFTER GRADUATION

Graduates with a B.S.

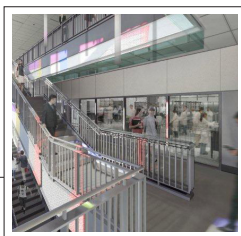
Maximum - \$80,000
Median - \$64,000

Graduates with an M.S.

Maximum - \$90,000
Median - \$63,440

RECENT EMPLOYERS OF BME GRADUATES:

Abbott, Abbvie, Accenture, Adimab, Aesculap Implant Systems, Alexion Pharmaceuticals, Aspen Technology, AstraZeneca, Becton-Dickinson, Blue Belt Technologies, Boehringer Laboratories, Boston Scientific, Carnegie Mellon University, Cook Biotech, Deloitte, Dentium, Dow Chemical, Eli Lilly, Emerald Therapeutics, Epic, Ethicon (Johnson & Johnson), Genentech, Genzyme, Helbling, Illumina, Integra LifeSciences, Intuitive Surgical, Joule Scientific, Lake Region Medical, Life Technologies, L'Oreal, Medical Physics & Health Physics Services, MedImmune, Merck, MicroPort Orthopedics, National Institutes of Health, Naval Research Laboratory, NNE Pharmaplan, Pfizer, Philips, Precision Engineering, Precision Therapeutics, PriceWaterhouseCoopers, Regeneron Pharmaceuticals, St. Jude's Children's Research Hospital, Siemens Healthcare, Stryker, Teva Pharmaceuticals, Thoratec, Tobii DynaVox, Unilife, Veterans Affairs Pittsburgh Healthcare System, WES Pharma, Zimmer Dental



Department Highlights

- To be relocated to Scott Hall in 2016; funding for the building will have a lasting impact on shaping the department's growth
- Young department undergoing rapid growth; average faculty age under 45
- Outstanding faculty, awards include: NSF CAREER, NIH Young Innovator, DARPA Young Faculty, Technology Review TR35, INPAC Young Chemist, American Heart Scientific Development, Coulter Translational Research, Presidential Early Career
- Numerous local physicians serve as adjunct faculty

RESEARCH AREAS

Biomaterials and Nanotechnology
Biomedical Imaging and Signal Processing
Cell and Tissue Engineering
Medical Devices and Robotics

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Investment Opportunities

FACILITIES

Biomedical Engineering Offices and Laboratories (Scott Hall)	\$5 million
Soft Lithography Laboratory (Scott Hall)	\$1 million
Research Labs	\$500,000
Biomedical Engineering Department Head Suite (Scott Hall)	\$300,000
Biomedical Engineering Commons (Scott Hall)	\$250,000
Undergraduate Lab Equipment and Upgrades	\$50,000 - \$250,000
Biomedical Engineering Faculty Offices (Scott Hall)	\$15,000

PROGRAMS

Equipment Upgrades and Maintenance	\$50,000 - \$500,000
Research Seed Funding	\$10,000 - \$500,000
Grants to Support Education Innovation	\$10,000 - \$250,000
Student Organizations	\$5,000 - \$100,000
Theme Research Symposia – Bioimaging Day, Biomechanics Day	\$2,000 - \$10,000

EXPENDABLE FELLOWSHIPS AND SCHOLARSHIPS

Seed Grants for Research or Education Innovation	\$10,000
Graduate Student Outstanding Research Award	\$2,000 - \$10,000
Outstanding Teaching Assistant Award	\$2,000 - \$10,000
Study Abroad	\$5,000
Student Travel Grants	\$2,000
Outstanding Senior Award	\$1,000 - \$3,000
Undergraduate Service Award	\$1,000 - \$3,000
Undergraduate Research Award	\$1,000 - \$3,000
Undergraduate Design Award	\$1,000 - \$3,000

Endowment Opportunities

NAME THE DEPARTMENT \$40 million*

STRATEGIC INITIATIVE ENDOWMENT \$50,000 - \$1 million

ENDOWED FACULTY CHAIRS/PROFESSORSHIPS/ PROFESSIONAL DEVELOPMENT FELLOWSHIPS

Department Head	\$3 million
Distinguished Professorship	\$3 million
Career Development Professorship	\$1.5 million

ENDOWED FELLOWSHIPS AND SCHOLARSHIPS

Full University Graduate Fellowship	\$750,000
Full Undergraduate Scholarship (need-based)	\$750,000
Graduate Fellowship (partial)	\$100,000
Undergraduate Scholarship (partial)	\$50,000
Endowed Student Awards	\$10,000

* Recommendation subject to university approval