BIOMEDICAL ENGINEERS PLAY KEY ROLES IN MEDICAL PRODUCT AND SERVICE COMPANIES

MORE THAN 700 COMPANIES IN INDIANA ALONE

LARGER SECTORS OF THIS INDUSTRY -- INCLUDING BIOTECHNOLOGY, PHARMACEUTICAL, MEDICAL DEVICE, AND ORTHOPEDIC COMPANIES

HAVE TOTAL SALES EXCEEDING $5.5 BILLION AND EMPLOY OVER 40,000 WORKERS
THE NEED TO EMPLOY BIOMEDICAL ENGINEERS IS PROJECTED TO GROW 23% FROM 2014 TO 2024 ACCORDING TO STATISTICS WITH THE US DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS.

THIS JOB OUTLOOK IS A MUCH FASTER PROJECTED GROWTH RATE THAN THE AVERAGE FOR ALL OCCUPATIONS.
THE BUREAU STATES THAT “GROWING TECHNOLOGY AND ITS APPLICATION TO MEDICAL EQUIPMENT AND DEVICES, ALONG WITH AN AGING POPULATION, WILL INCREASE DEMAND FOR THE WORK OF BIOMEDICAL ENGINEERS.”
MS BME – Biomedical Device Development

• TAKE A DEEPER DIVE INTO THE CONTENT, CONCEPTS AND PROFESSIONAL SKILLS THAT WILL HELP YOU BECOME A PIVOTAL PLAYER IN THE INDUSTRY.

• INCREASE YOUR TECHNICAL DEPTH AND UNDERSTANDING OF REGULATORY SCIENCE.

• FURTHER DEVELOP YOUR COMMUNICATION AND LEADERSHIP SKILLS.

PREPARE FOR YOUR NEXT MOVE
MS BME – Biomedical Device Development

A professional master’s degree

TWO ON-CAMPUS DEGREE OPTIONS:

• ACCELERATED 1-YEAR BIOMEDICAL DEVICE DESIGN, MS BME

• BIOMEDICAL DEVICE DESIGN WITH INDUSTRY IMMERSION-18 MONTH TO 2-YEAR PROGRAM

*OPEN TO GRADUATES FROM ANY SCIENCE AND ENGINEERING DISCIPLINE.
YOUR MASTER’S STUDIES:
DETAILS FOR THE 1-YEAR AND 2-YEAR PROGRAMS
**PROGRAM AT-A-GLANCE**

- **Biomedical Engineering (6 cr.)**
- **Quantitative (3 cr.)**
- **Life Science (3 cr.)**
- **Professional Skills and Regulatory Affairs (12 cr.)**
- **Electives for Specialization (6 cr.)**
BIOMEDICAL DEVICE DEVELOPMENT
TYPICAL PLAN OF STUDY

<table>
<thead>
<tr>
<th>Semester 1 / Fall / On Campus</th>
<th>12 credits of coursework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 2 / Spring / On Campus</td>
<td>12 credits of coursework</td>
</tr>
<tr>
<td>Semester 3 / Summer / On Campus</td>
<td>6 credits of coursework</td>
</tr>
</tbody>
</table>

30 credits of study = Master of Science in Biomedical Engineering with a concentration in Biomedical Device Development
Biomedical Device Development w/ Industry Immersion

**Typical Plan of Study**

<table>
<thead>
<tr>
<th>Semester 1 / Fall / On Campus</th>
<th>9 credits of coursework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 2 / Spring</td>
<td>9 credits of coursework</td>
</tr>
<tr>
<td>Semester 3 / Summer / Off Campus</td>
<td>Internship + 3 credits of coursework</td>
</tr>
<tr>
<td>Semester 4 / Fall / Off Campus</td>
<td>Internship + 3 credits of coursework</td>
</tr>
<tr>
<td>Semester 5 / Spring / On Campus</td>
<td>6 credits of coursework</td>
</tr>
</tbody>
</table>

**AT THE END OF THE PROGRAM, YOU WOULD HAVE A MASTER OF SCIENCE IN BIOMEDICAL ENGINEERING, ADDITIONAL TECHNICAL DEPTH, A GRADUATE-LEVEL EXPOSURE TO THE BIOMEDICAL INDUSTRY, AND UP TO ONE YEAR OF WORK EXPERIENCE.**
Learning Impacts

• A functional understanding of the design and development of biomedical products and processes at the systems level

• A practical understanding of the processes to ensure quality, testing, and approval of biomedical products

• A more seasoned ability to make well-reasoned, ethical-, and socially-responsible engineering decisions in a variety of scenarios

• An experienced skill-set of communicating clearly, negotiating effectively, and leading strategically while contributing to biomedical engineering projects
“We consistently need engineers who have not only the foundational skills and knowledge of undergraduate engineering, but who have also furthered their education to develop skills in project management, organizational leadership, and regulatory requirements that govern most of the medical industry”

Mark Bleyer, former President, CEO, Cook Biotech
Placement Success
Master’s Internship, Co-Op, Full-Time

• Abbott Vascular
• Apple
• BD (Bard)
• Biosense Webster
• Boston Scientific
• Con Med
• Cook Biotech
• Cook Research
• Deloitte
• Depuy Synthes
• Eli Lilly
• Lutonix
• Ethicon
• Medical Murray
• Merck
• Nevro
• Philips
• Project Farma
• Roche Diagnostics
• Smith & Nephew
• Stryker
• Thermo Fisher
• Zimmer Biomet
HOW TO APPLY

Accepting applications for the Fall 2020 term.

Apply by June 1st
ALL DEGREE-SEEKING APPLICATIONS MUST INCLUDE:

- COMPLETED ELECTRONIC APPLICATION
- APPLICATION FEE PAYMENT
- COPY OF OFFICIAL TRANSCRIPTS FROM ALL INSTITUTIONS ATTENDED
- LETTERS OF RECOMMENDATION
- STATEMENT OF PURPOSE
- GRE EXAM WAIVE FOR CURRENT PURDUE STUDENTS
### Biomedical Device Development

**1-year Option**

<table>
<thead>
<tr>
<th>Indiana Resident</th>
<th>Non-Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>$13,780</td>
<td>$37,283</td>
</tr>
</tbody>
</table>

### Biomedical Device Development with Industry Immersion

**2-year Option**

<table>
<thead>
<tr>
<th>Indiana Resident</th>
<th>Non-Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>$21,685</td>
<td>$41,533</td>
</tr>
</tbody>
</table>

*International graduate students pay an additional $80 International fee per semester.*
QUESTIONS?
Enrollment Data
Fall Census, 2019-2020

- Avg. GPA: 3.56
- Enrolled: 8
- International: 3 (higher in past years)
- Women: 4
- Men: 4
- Industry Immersion: 4
- Total Current Enrollment: 13
- Fall 2020: Currently 20 students