

BIOMEDICAL ENGINEERING
Whitaker Foundation
INTERNSHIPS IN INDUSTRY
Louisiana Tech University

GOALS FOR STUDENT INTERNS

- X Knowledge of the industrial environment
 - X Information Management
 - X Research and development
 - X Marketing
 - X Business practices
 - X Manufacturing
 - X Quality control
 - X Management

- X Experience in investigating, analyzing, and reporting a medical product design, development, or distribution problem

- X Enhancement of professional communication skills

- X Understanding of professional engineering ethics

- X Improved academic performance, critical thinking, creative problem-solving, and career satisfaction

BENEFITS TO INDUSTRIAL SPONSORS

Students offer:

- X Completion of specific engineering tasks

- X Results, products, innovations

- X Enthusiasm and new ideas

On-going program offers:

- X Cost-effective recruiting and screening program

- X Positive campus relations

- X Development of supervisory and training skills by company mentors

QUALIFICATIONS OF STUDENT INTERNS

- X Two years of engineering and science courses
 - X biomedical engineering
 - X biological science
 - X engineering mechanics
- X Good academic standing (2.8 GPA or company minimum)

EXPECTATIONS FOR INTERNSHIP SPONSORS

- X Provide appropriate intern position for 10-12 consecutive weeks, 40 hours per week
- X Provide a company mentor (engineer) to guide and evaluate the student
- X Prepare a mutually developed statement of company and educational goals
- X Support of student
 - X Stipend to student from grant for one to two years (relocation expense)
 - X Company support student in subsequent years

SCHEDULE

- X Fall: Recruitment of industrial sponsors
- X February 1: Companies respond
- X February 15: Industrial sponsors posted
- X March 1: Students submit resumes (and goals)
- X April 1: Sponsors select interns (telephone, on-campus, or on-site interviews)
- X June 1: Internships begin
 - X Students submit progress reports (weeks 3, 6 and 9)

BIOMEDICAL ENGINEERING ACADEMIC PROGRAM AT LOUISIANA TECH UNIVERSITY

CURRICULUM

- * Emphasizes engineering fundamentals, basic life sciences, and broad biomedical engineering principles
- * Specialization areas:
 - * Chemical Engineering
 - * Mechanical Engineering
 - * Electrical Engineering
 - * Pre-Medical

ACCREDITATION

- * Nationally accredited by Accreditation Board for Engineering and Technology (ABET)

SENIOR COURSES

- * Biomaterials and Biomechanics
- * Biomedical Mass Transport
- * Advanced Biomedical Instrumentation
- * Physiological Control Systems
- * Capstone Design Project (two quarters)

EMPLOYERS OF TECH GRADUATES

- * Medical Instrumentation Companies (e.g. Siemens, Medtronic, Mallinckrodt)
- * Orthopedic Device Companies (e.g. Richards Medical, Sofamor Danek, DePuy)
- * Hospital Products Companies (e.g. Baxter Healthcare, Abbott Laboratories, Burrion Medical)
- * Pharmaceutical Companies (e.g. Boots Pharmaceutical)
- * Aerospace Life Science Companies/Divisions (e.g. Wyle/Krug Life Sciences, Bionetics, General Electric, McDonnell Douglas)
- * Governmental Research and Regulatory Agencies (e.g. NASA, FDA, U.S. Army Biomedical R & D Lab)
- * Private Research Organizations (e.g. Southwest Research Institute)
- * Hospitals (e.g. Veteran's Administration and other private hospitals, General Electric Medical Systems contract services)

EMPLOYMENT RESPONSIBILITIES

- * Research (basic and applied)
- * Product Design and Development
- * Manufacturing
- * Quality Control
- * Marketing and Sales
- * Engineering Management

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