

BIOMEDICAL ENGINEERING (B,M,D)

Biomedical engineers design the medical technology to maintain and improve our quality of life. They work for pharmaceutical and medical device companies, hospitals and rehabilitation centers, and medical research institutes.

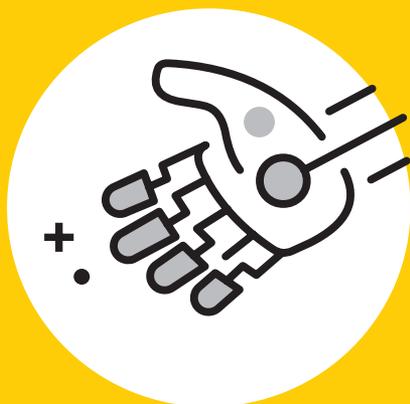
JOB TITLES:

Biomedical Project Engineer
Research Engineer
Process Engineer
Quality Engineer
Biomedical Engineer
Clinical Engineer
Product Support Engineer
Biomedical Technician

MEDIAN SALARY: \$92,620

POTENTIAL JOB DUTIES/ JOB DESCRIPTIONS:

Apply knowledge of engineering, biology and biomechanical principles to the design, development and evaluation of biological and health systems and products, such as artificial organs, prostheses, instrumentation, medical information systems and health management and care delivery systems. Graduates also pursue careers in medicine, physical therapy, prosthetics and orthotics, dentistry and pharmacy.



COMPUTER ENGINEERING (B,M,D)

Computer engineers work on the interfaces between computer hardware (physical devices) and software (the programs running on devices). They develop new computer architectures (CPUs and microcontrollers), computing paradigms (GPU programming), computer-based control systems (smart devices, Internet of Things), and smart appliances (embedded vehicular computers).

JOB TITLES:

Computer Architect
Embedded Systems Engineer
Network Engineer
Project Engineer
Hardware Engineer
Systems Engineer
Systems Architect
Data Analyst

MEDIAN SALARY: \$116,780

POTENTIAL JOB DUTIES/ DESCRIPTIONS:

Research, design, develop, or test computer or computer-related equipment for commercial, industrial, military, or scientific use. May supervise the manufacturing and installation of computer or computer-related equipment and components.



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- ➔ **AEROSPACE ENGINEERING**
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- ➔ **APPLIED COMPUTING, COMPUTER SCIENCE**
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- ➔ **BIOMEDICAL ENGINEERING**
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- ➔ **ELECTRICAL ENGINEERING,
COMPUTER ENGINEERING**
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- ➔ **ENGINEERING TECHNOLOGY,
FACILITIES MANAGEMENT**
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WICHITA STATE
UNIVERSITY

COLLEGE OF ENGINEERING

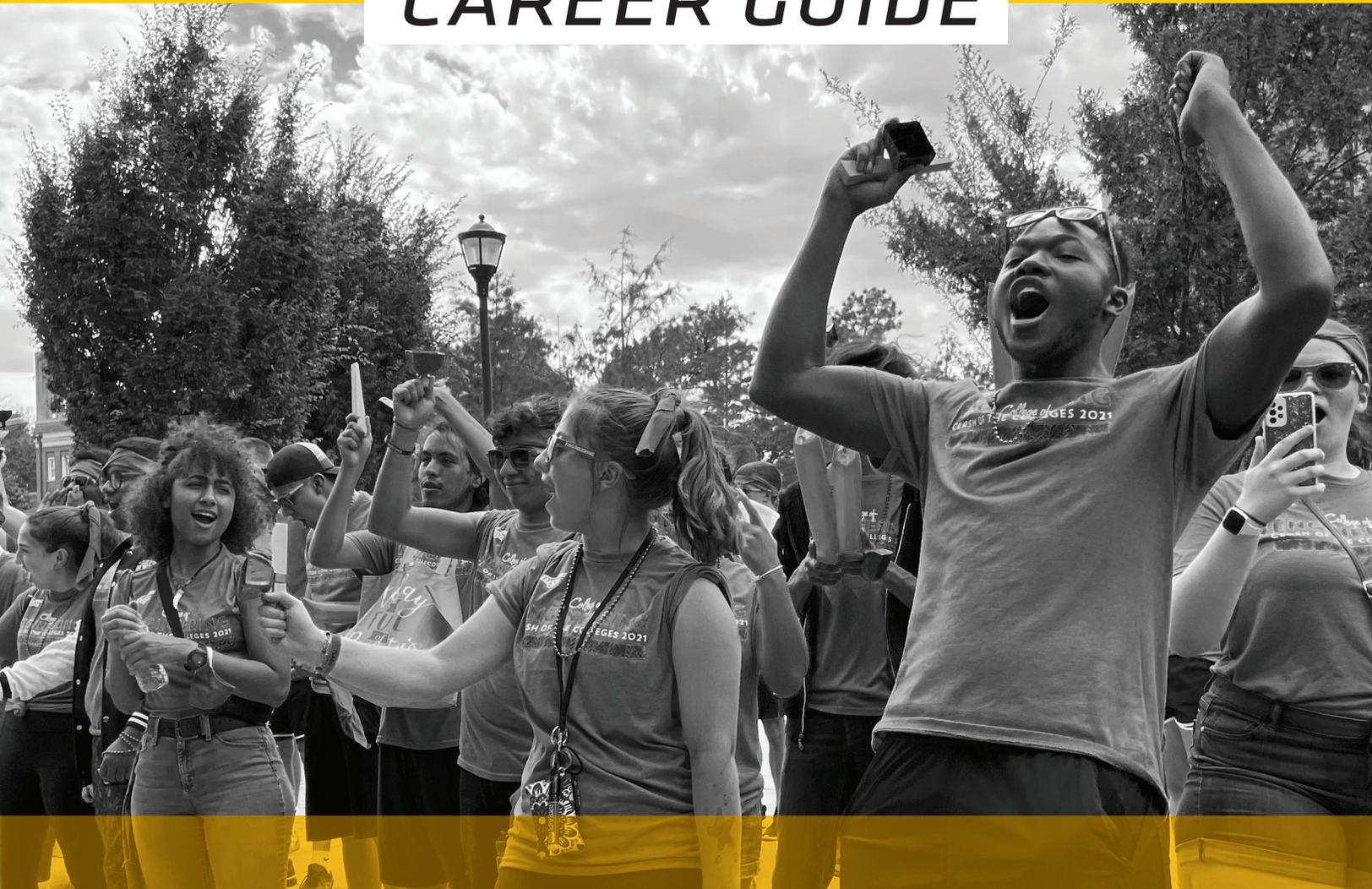
*Career and Employment Data from www.onetonline.org

 KSDegreeStats.org

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COLLEGE OF ENGINEERING

CAREER GUIDE





AEROSPACE ENGINEERING (B,M,D)

Our aerospace engineering students learn aerodynamics, structures, propulsion and control systems. They work everywhere from traditional aircraft/spacecraft companies to NASA. They also work in spin-off industries that similarly demand lightweight and optimized high-performance products, including the automotive (racing), energy (wind), and medical fields.

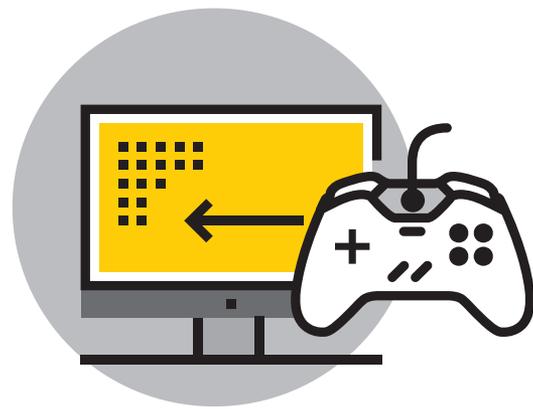
JOB TITLES:

Aeronautical Engineer
Systems Engineer
Structural Analysis Engineer
Flight Test Engineer
Flight Controls Engineer

MEDIAN SALARY: \$118,610

POTENTIAL JOB DUTIES/ DESCRIPTIONS:

Perform engineering duties in designing, constructing and testing aircraft, missiles and spacecraft. May conduct basic and applied research to evaluate adaptability of materials and equipment to aircraft design and manufacture.



APPLIED COMPUTING (B)

Students in the Applied Computing program learn how to apply computer technology skills with a broad understanding of how these skills operate in the real world. With a focus on experiential learning, students prepare for careers in computer analytics, cybersecurity, data analysis, game development and social media applications.

Students can earn certificates in: Cybersecurity Essentials, Data and Web Security, Cyber-Physical Systems, Human Factors in Security Technology, and Applied Data Analysis

JOB TITLES:

Computer Support Specialist
Cybersecurity Analyst/Engineer/Support
Network/Systems Support Specialist
Technology Consultant
Network Engineer
Webmaster/Administrator
Data Warehousing Specialist
Network/Systems Administrator
Web Developer
Cyber/Information Security Engineer

MEDIAN SALARY: \$90,672



COMPUTER SCIENCE (B,M,D)

Computer science is the perfect mixture of science and engineering; it is the study of computer-based algorithmic processes that describe, transform and interpret information. Recent advances in artificial intelligence, machine and deep learning (internet search, voice control personal assistants, data driven discovery), highly reliable computer networks (internet), distributed computing (Cloud), and quantum computing are all results of computer science.

JOB TITLES:

Computer Scientist
Computer Systems Architect
Software Engineer
Data Scientist

MEDIAN SALARY: \$126,830

POTENTIAL JOB DUTIES/ DESCRIPTIONS:

May design software for computer systems or embedded devices. Research, design, implement, and test algorithms for computing based problem solving, analysis, and modeling.



ELECTRICAL ENGINEERING (B,M,D)

Electrical engineers are the driving force of technology innovation and development for the advancement of humanity: communication (LTE, 5G, Wi-Fi, Bluetooth, radar), electronic devices (smart phones, computers, car infotainment systems, medical devices), control systems (UAVs and self-driving cars, automation) or power systems (renewable power, power grid and delivery, electric motors for electric vehicles).

JOB TITLES:

Circuits Engineer
Electrical Design Engineer
Telecommunications Engineer
Controls & Automation Engineer
Power Systems Engineer
Electrical Reliability Engineer
Electrical Test Engineer
Electrical Project Engineer
Instrumentation Engineer
Avionics Electrical Engineer
Electronics Engineer
Analog / RF Engineer

MEDIAN SALARY: MEDIAN: \$103,390

POTENTIAL JOB DUTIES/ DESCRIPTIONS:

Research, design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use.



ENGINEERING TECHNOLOGY (B)

Our broad program allows students to specialize in several career areas. Examples of some of these include the following:



Advanced Automation: Design, plan and perform engineering duties in industrial automation and manufacturing, which includes robotics, mechatronics, automated equipment, factory 4.0 and instrumentation design.

JOB TITLES:

Robotics Engineer/Technician

Mechatronics Engineer

Control systems engineer

Manufacturing Engineer

Electromechanical Engineer

Automation Engineer

Instrumentation Engineer

Systems Integrator

MEDIAN SALARY: \$83,481



Engineering Management: Plan, initiate and manage engineering and technology projects. Lead and guide the work of technical staff. Serve as liaison between business and technical aspects of projects.

JOB TITLES:

Manufacturing Process Engineer

Project Manager

Transition Program Manager

Senior Engineering Team Lead

MEDIAN SALARY: \$88,510



Sustainability Technology: Research, design, plan and perform engineering duties in environmental management, pollution control and assessment, energy and water management and sustainability. Work may include water/waste treatment, pollution prevention technology, or energy and water sustainability management.

JOB TITLES:

Environmental Engineer

Environmental Engineering Technician

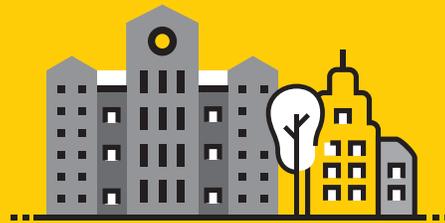
Environmental Scientist

Sustainability Engineer

Renewable Energy Engineer

Energy Engineer

MEDIAN SALARY: \$84,770



FACILITIES MANAGEMENT (B)

Facilities Management integrates people, places, process and technology within the built environment with the purpose of improving the quality of life of people and the productivity of the core business.

JOB TITLES:

Facilities Manager

Director of Facilities

Facilities Coordinator

Facilities Engineer

Maintenance Manager

MEDIAN SALARY: \$68,984

INDUSTRIAL ENGINEERING (B,M,D)

Industrial Engineers work to design large and complex systems of people, money, information energy, equipment and materials to operate more effectively through data analytics and risk estimation. The industrial engineering approach integrates subjects in mathematics, data analytics, physical and social sciences, economics and the engineering design to answer questions like “how does FedEx get packages from 10 towns in Kansas to Beijing, China in just two days?” Or, “how to design a factory, its production systems, supply chain, and quality control systems while keeping the product cost low?”

JOB TITLES:

Data analyst

Operations Engineer

Plant Engineer

Supply Chain Engineer

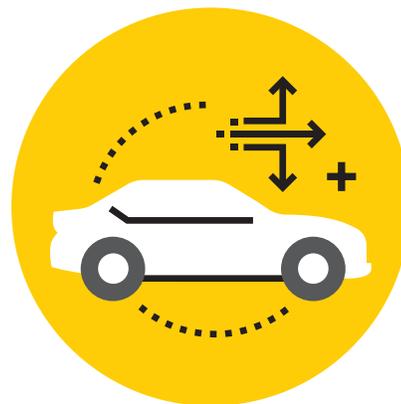
Quality Control Engineer

Ergonomics Engineer

MEDIAN SALARY: \$88,950

POTENTIAL JOB DUTIES/ DESCRIPTIONS:

Design, develop, test and evaluate integrated systems for managing industrial and service processes, including human factors, quality control, inventory control, logistics & supply chain, material flow, cost analysis and production coordination through data collection and analytics.



MECHANICAL ENGINEERING (B,M,D)

Students in Mechanical Engineering study mechanics, materials, thermo-fluids and controls with direct application to autonomous vehicle design, alternative energy, water/energy conservation, nano-bio-electronic materials, artificial intelligence and robotics, and other interdisciplinary areas. Upon graduation, our students enter the job market in aircraft, automobile design, energy, petroleum, and process industries to build nearly every machine employed by society.

JOB TITLES:

Design Engineer

Process Engineer

Application Engineer

Test Engineer

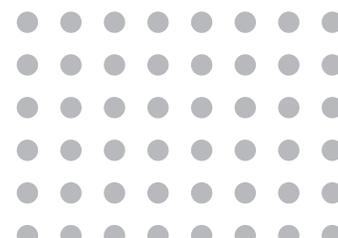
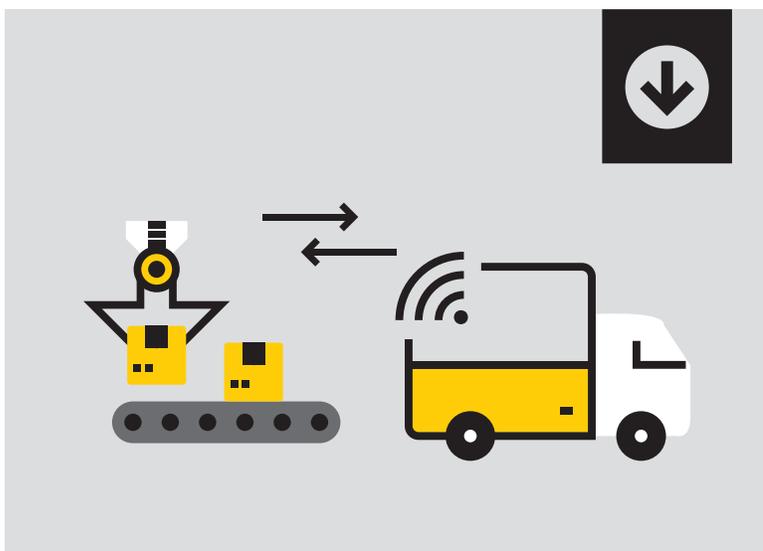
Development Engineer

Production Engineer

MEDIAN SALARY IN MIDWEST: \$90,160

Potential job duties/ descriptions:

Perform engineering duties in planning and designing tools, engines, machines and other mechanically functioning equipment. Oversee installation, operation, maintenance and repair of equipment such as centralized heat, gas, water and steam systems.





PRODUCT DESIGN AND MANUFACTURING ENGINEERING (B)

Product design and manufacturing engineering is an interdisciplinary curriculum that teaches students to design products and the manufacturing processes that transform raw materials, parts and subassemblies into intermediate and final products through traditional, and non-traditional processes, and with the use of smart automation systems such as IOT based Robotics and Controls.

JOB TITLES:

Facility Engineer

Automation Engineer

Robotics and IOT based Systems Engineer

Plant Engineer

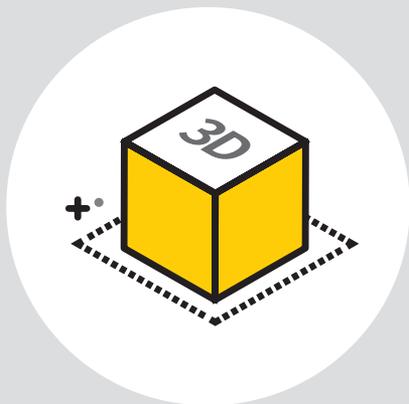
Quality Control Engineer

Director of Manufacturing

MEDIAN SALARY: \$97,250

POTENTIAL JOB DUTIES/ DESCRIPTIONS:

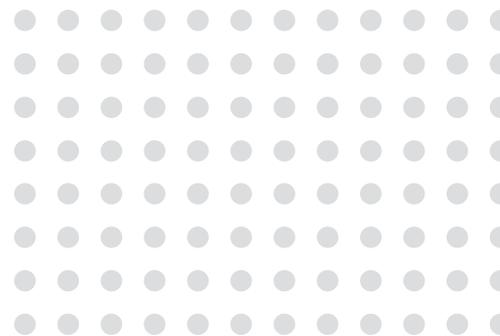
Design, integrate or improve manufacturing systems or related processes. May work with designers to increase productivity, to refine product designs and decrease costs. Also design automation systems for robotics and controls of the factory.



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