

# WHAT CAN I DO WITH MY BIOINFORMATICS/ COMPUTATIONAL BIOLOGY DEGREE?



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## **Using the Major Sheet:**

- Large headings indicate **industry** area and subheadings indicate **employers** within that area.
- Use the titles to search for careers and related careers in order to explore your options within different areas of industry. Note that some career titles have multiple names for similar positions.
- An asterisk (\*) notes that additional training (certification, graduate school, high level of experience) may be needed in order to obtain this career. Make sure to thoroughly research career pathways.

## **COMPUTER SCIENCE/ENGINEERING**

**Computer Service Co., Large Corp. / Organizations, Software Development Firms, Biotechnology Companies**

- Computational Biologist
- Molecular Modeling Researcher
- Software Engineer
- Software Engineer
- Bioinformatics Software Developer
- Computer Programmer
- Database Management
- Computational Analyst
- Software Developer
- Web Developer
- Data Analyst
- Digestion of Data
- Sequence Assembler
- Technical Support

## **INFORMATION TECHNOLOGY**

**Computer Service Corp. / Organizations, Software Development Firms, Biotechnology Companies**

- Bioinformatics Analyst
- Network Administrator
- Clinical Data Manager
- Biostatistician
- Data Visualization Specialist
- Laboratory Information Systems Analyst
- Database Programmer
- Data Mining Specialist

## **APPLIED SCIENCE**

**Medical and Hospital Clinics, Pharmaceutical Companies, Industrial Firms, Bioengineering Companies, Private or Hospital Diagnostic Laboratories, Agricultural Institutions**

### ***Biotechnology***

- Forensic Biological Scientist
- Biostatistician
- Biologist
- Biomedical Chemist
- Molecular Microbiologist
- Chemistry Technologist
- Research Scientist
- Bioinformatician
- Biotechnologist
- Product Researcher
- Protein Matching
- Product Developer

### ***Medical/Pharmaceutical/Genetics***

- Biomedical Engineer
- Public Health/Infection Control
- Healthcare Scientist
- Phylogenitist
- Gene Analyst
- Pathologist
- Cytotechnologist
- Biomedical Scientist
- Medical Writer
- Proteomic Specialist
- Pharmacologist
- Protein Analyst
- Cheminformatician
- Medical Technologist
- Genetic Researcher
- Geneticist
- Pharmacogenomicist
- Anatomist
- Scientific Curator
- Pharmacogenetician
- Virologist

## **EDUCATION/PUBLISHING**

### **Colleges and Universities, Industrial Firms, Research Institutes, Government Labs**

- Research Scientist
- Educational Programs Manager
- Public Health Educator
- Bioinformatics Professor
- Mathematician

## **GOVERNMENT/INDUSTRY**

### **Bioengineering Companies, Public Health Service, Department of Health and Human Services, Environmental Protection Agencies, Food and Drug Administration, etc.**

- Systems Engineer
- Operations Research Analyst
- Environmental Engineer
- Consultant
- Statistician
- Environmental Scientist
- Agricultural Analyst
- Plant Breeder
- Market Analyst

## **PREPROFESSIONAL PREPARATION**

### **Prepares for Graduate Programs in:**

- Management
- Math
- Dentistry
- Business
- Science
- Nursing
- Law
- Medicine

### **Preparation for a Competitive Job Market:**

- **Focus on transferable skill sets**, as you pursue a degree in Bioinformatics/Computational Biology.
- **Obtain relevant internship, co-op, or volunteer experiences.**
- **Supplement Bioinformatics/Computational Biology course work with classes** that are **relevant** to your career.
- **Meet with a Career Specialist** to explore options, make decisions, and prepare for career choices.

### **Additional Career Center Resources:**

- **Major Sheets (BIOL, BIOC, BTEC, MATH, MOCB):** <https://careers.umbc.edu/tools/majors/>
- **The Vault:** <https://careers2.umbc.edu/tools/vault/>

- Use the top search bar to find these relevant guides:

- [“Vault Guide to Pharmaceuticals and Biotechnology Jobs”](#)
- [“Vault Guide to Biology and Life Sciences Jobs”](#)
- [“Vault Guide to Government Jobs”](#)
- [“Vault Guide to Health Care Provider Jobs”](#)
- [“Vault Guide to Dental Care Jobs”](#)
- [“Vault Career Guide to Health Care Management”](#)
- [“Vault Career Guide to Pharmaceuticals and Biotechnology”](#)
- [“Vault Guide to Health Care and Pharmaceuticals Consulting Jobs”](#)
- [“Vault Guide to Medical Equipment Manufacturing Jobs”](#)

- **Professional Associations:**

The International Society for Computational Biology: [www.iscb.org](http://www.iscb.org)  
Society for Industrial Microbiology and Biotechnology: <https://www.simbhq.org/>  
American Institute for Biological Sciences: <https://www.aibs.org/home/index.html>  
National Association of Science Writers: <https://www.nasw.org/>  
Association of Clinical Research Professionals: <http://www.acrpnet.org/>

- **Additional Resources:**

Insight Data Science Fellows Program: <http://insightdatascience.com/>  
Virology Journal: <https://virologyj.biomedcentral.com/>  
Bioinformatics.org: <http://www.bioinformatics.org/>  
Health eCareers: <https://www.healthcareers.com/>

- **Professional/Graduate School Resources:**

UMBC PreMedical and PreDental Advising Office: <http://premed.umbc.edu/>  
Graduate Guide: <http://www.graduateguide.com/>  
National Association of Graduate and Professional Students: <http://nagps.org/>