What Can I Do With a Joint Major in Mathematical and Computational Biology?

Harvey Mudd College mathematical and computational biology alumni went on to the following organizations and universities between 2021 and 2025.

Job Titles

Associate Computational Biologist
Engineering Analyst
Junior AI Research Engineer
Project Coordinator
Research Specialist
Research Technician
Schmidt Scholar
Software Developer
Software Engineer
Solutions Engineering Analyst

Employers

Baylor College of Medicine
Caltech
Deloitte
EasyPost
EKN Engineering
Ellison Institute of Technology
Goldman Sachs
National Institutes of Health
Stanford University
Weill Cornell Medicine

Graduate Schools

Baylor College of Medicine
Case Western Reserve University
Cornell/Memorial Sloan Kettering Cancer Center/ Rockefeller University
Georgia Institute of Technology
Northwestern University
Ohio State University
Stanford University
UC Irvine
UC Riverside
University of Chicago
University of Southern California
University of Washington
Weill Cornell Medical College

Summer Employers

Amazon Web Services
Baylor College of Medicine REU
Bionaut Labs
Caltech REU
Cold Spring Harbor Laboratory REU
Illinois State University REU
Jet Propulsion Lab*
Johns Hopkins REU*
Karolinska Institute REU
Kate Therapeutics
Memorial Sloan Kettering Cancer Center REU
National Oceanic and Atmospheric Administration
National University of Singapore REU*
Oak Ridge National Laboratory
Pomona College REU
Rackspace Technology
Rivet Anomalytics
Roblox
Scripps Research
Smithsonian Institution
UCLA REU
UC San Francisco*
University of Pittsburgh REU
U.S. Environmental Protection Agency*
Weill Cornell
Yale REU

**companies that hired first-year students*

Here are a few areas that may interest a mathematical and computational biology major.

Area	Employers
PROGRAMMING Systems Scientific application Project management Testing	Software and computer companies Research laboratories Colleges and universities Governmental agencies Management consulting firms
SYSTEMS DEVELOPMENT Analysis Design Support Quality assurance Data processing	Local, state and federal government Financial institutions Insurance companies Consulting firms Manufacturers Technology companies Research institutions

Areas of interest for a mathematical and computational biology major (CONTINUED)

Area	Employers
INTERNET Software design Systems analysis	Online service providers Computer/equipment vendors Internet-related companies (browsers, search engines, web design services)
PROGRAMMING Systems Scientific application Project management Testing	Software and computer companies Research laboratories Colleges and universities Governmental agencies Management consulting firms
BIOTECHNOLOGY Research and development Education	Pharmaceutical companies Biotech firms State and federal government laboratories and agencies Agricultural industry Colleges and universities
GENETICS Research and development related to animals, plants and humans Genetic counseling	Pharmaceutical companies Biotech firms Government laboratories (e.g., U.S. Department of Agriculture, U.S. Fish and Wildlife Service and National Institute of Health) Hospitals and medical centers
MICROBIOLOGY Research and development Education Quality control	Pharmaceutical companies Private research foundations Hospitals and public health facilities Food, chemical, pharmaceutical and cosmetic companies Environmental and pollution control agencies Museums, national and state parks Zoological/botanical gardens

What You Can Do Now

- Obtain summer research, part-time, volunteer, or internship experience to test the fields of interest and gain valuable experience
- Develop strong computer, mathematics and verbal and written communication skills
- Take additional courses in chemistry, physics, economics and statistics
- Complete an undergraduate lab research project with a professor
- Learn federal, state and local government job application processes since these are large employers of this major
- Become familiar with entrance exams for graduate school in your area of interest
- Build relations with faculty for research opportunities and later letters of recommendation

What You Can Do After Graduation

- An undergraduate degree is often sufficient for entry-level positions, such as laboratory assistant, technician, technologist or researcher, but an advanced degree may open more doors and definitely more upper-level positions.
- A master's degree will be helpful for advanced positions or for consulting jobs. Some community colleges will hire master's level teachers.
- A PhD is needed for academic positions and certain areas of research.