What Can I Do With a Major in

MATHEMATICAL AND COMPUTATIONAL BIOLOGY?

Below is a list of job titles, employers and graduate schools that Harvey Mudd College mathematical and computational biology alumni have chosen in the last five years.

Job Titles
Consultant
Software Engineer
Junior Anesthesia Specialist
Fisheries Biologist
Store Manager
Volunteer
Project Coordinator

Employers
California Department of Fish & Game
Deallus Group
Harvey Mudd College
Intellectual Ventures
Laserfiche
Marathon Sport
Peace Corps
UC Irvine Medical Center

Graduate Schools
American Museum of Natural History
Arizona State University
California Institute of Technology
Duke University
Johns Hopkins University
Pacific Northwestern University of Health Sciences
University of California, Los Angeles
University of California, San Francisco
University of California, Santa Cruz
University of Iowa-Carver College of Medicine
University of Washington
Tufts University

Starting Salary Summary
High Salary Range
$70,000 – $74,999
Low Salary Range
$40,000 – $44,999
Median Salary Range
$55,000 – $60,000

Summer Employers
Amazon
Boston University (psychology lab internship)*
Broad Institute
DxTerity Diagnostics
GKRH
NIMBioS (REU)
Southwest Fisheries Science Center
companies that hired for first-year students

Average Summer Wages
First-year
$3,250 stipend
Sophomore
$4625 stipend
Junior
$4500 stipend

Here are just 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
INTERNET Software design Systems analysis	Online service providers Computer/equipment vendors Internet-related companies (browsers, search engines, web design services)
MARKET RESEARCH Data collection Information analysis	Market research firms Consumer goods Manufacturing firms

Area	Employers
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, & human 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	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.