



Department of Molecular Biosciences and Bioengineering
College of Tropical Agriculture and Human Resources
University of Hawai'i at Mānoa

MBB

Molecular Biosciences and Biotechnology



Picture Yourself

- Discovering new principles of genetics, cell biology, and biochemistry
- Developing more nutritious or otherwise superior crops through genetic engineering
- Restoring areas of the environment with bioremediation
- Creating a cutting-edge farm on which you raise aquatic animals and plants together
- Modifying plant crops to be new sources of bioenergy or to make them resistant to pests without the use of harmful chemicals
- Becoming a biology teacher and sharing the latest information on biotechnology.



Molecular Biosciences and Biotechnology Is for You!

Molecular Biosciences and Biotechnology (MBB) is an interdisciplinary Bachelor of Science degree program designed to educate students in the exciting and growing field of biotechnology, which promises to be the predominant science of the early 21st century.

Students choose courses and a senior research project from the following topics:



- **General Biotechnology:** Allows students to take the maximum range of elective courses to obtain an overview of biotechnology applications.
- **Environmental and Microbial Biotechnology:** Offers classes pertinent to monitoring and reducing chemical and microbial contaminants in the human environment.
- **Plant Biotechnology:** Presents the methods and objectives of plant tissue culture and genetic modification for agricultural or industrial purposes.
- **Insect and Pathogen Biotechnology:** Provides training in technologies that protect plants under human management from attack by insects or diseases.
- **Aquaculture and Bioreactor Biotechnology:** Focuses on the design and operation of artificial environments for efficient production of high-value compounds and organisms.

Work With Top Professors . . .

. . . and join an internationally recognized group of scholars that includes experts in plant, insect, and microbial genetic engineering; the microbial environment; pollution prevention; aquaculture biochemistry; and related areas who are graduates of such schools as UC-Davis, Arizona, Washington State, UC-Berkeley, and other top universities. Get to know and learn from these professionals through laboratory and field experiences and our unique lab rotation and senior thesis requirements.

Use Cutting-Edge Technology . . .

. . . such as proteomics, immunolabeling, bioinformatics, functional genomics, gene splicing, recombinant DNA technology, RNA hybridization, gas chromatography-mass spectrometry, high-performance liquid chromatography, and more.



Team Up With Award-Winning Students . . .

. . . recognized locally, nationally, and internationally for their achievements.

Open Doors to New Careers and Opportunities

This major is geared to preparing students for graduate school, medical school, agriculture, forensics, teaching, and technical and professional research careers in government and industry. Depending on the courses and research project chosen, students are prepared for employment in the pharmaceutical research industry, genetic testing, aquaculture, marine biotechnology, large-scale production of valuable organisms and cells in bioreactors, environmental monitoring and cleanup (bioremediation), plant biotechnology, control of plant pathogens, molecular diagnostics, and forensics.

For Fun and Friends

The College of Tropical Agriculture and Human Resources has numerous student organizations that provide you with the opportunity to meet new friends with interests similar to yours and participate in social, community-service, and field-related activities. Because this is a new undergraduate program, you could have the opportunity to help create a student organization designed especially for MBB majors.

Are You Prepared?

The MBB faculty can help to prepare you for the future. Upon entering the program, students will be assisted by academic advisors to identify their career objectives and select appropriate courses for study, as well as their senior research project.



We're Here to Help

- ***Contact the Department of Molecular Biosciences and Bioengineering***

Department of Molecular Biosciences and Bioengineering
College of Tropical Agriculture and Human Resources
University of Hawai'i at Mānoa
1955 East West Road, Ag Sciences Building 218
Honolulu, HI 96822
Phone: 808-956-8384
Fax: 808-956-3542
Email: mbbe@ctahr.hawaii.edu
Web: www.ctahr.hawaii.edu/acad

or

- Office of Academic and Student Affairs
College of Tropical Agriculture and Human Resources
University of Hawai'i at Mānoa
3050 Maile Way, Gilmore Hall 211
Honolulu, HI 96822
Phone: 808-956-8183, 808-956-6997
Fax: 808-956-3706
Email: acadaff@ctahr.hawaii.edu
Web: www.ctahr.hawaii.edu/acad

Want More Information?

To learn more about Molecular Biosciences and Biotechnology, visit www.ctahr.hawaii.edu/acad

For other pertinent information regarding being a student at UH-Mānoa, visit the UH website: www.hawaii.edu.

You may also contact ...

For admission:

Office of Admissions and Records
University of Hawai'i at Mānoa
2600 Campus Road, QLC 001
Honolulu, HI 96822
Phone: 808-956-8975
Email: uhmanoa.admissions@hawaii.edu
Web: manoa.hawaii.edu/admissions

For financial aid:

Financial Aid Services
University of Hawai'i at Mānoa
2600 Campus Road, QLC 112
Honolulu, HI 96822
Phone: 808-956-7251
Email: finaid@hawaii.edu
Web: www.hawaii.edu/fas

For employment opportunities:

Mānoa Career Center
2600 Campus Road, QLC 212
Honolulu, HI 96822
Phone: 808-956-7007
Email: careers@hawaii.edu
Web: manoa.hawaii.edu/careercenter

For housing (on and off campus):

Student Housing Services
2555 Dole Street, Frear Hall
Honolulu, HI 96822
Phone: 808-956-8177
Email: uhmsh@hawaii.edu
Web: manoa.hawaii.edu/housing

Accept the CTAHR Challenge!

Be where
the action is
in science and
technology!

Join Us!

Office of Academic and
Student Affairs
Dr. Charles Kinoshita,
Associate Dean