



University of Hawai'i at Mānoa
College of Tropical Agriculture and Human Resources Program Sheet 2013-2014
Bachelor of Science (BS) in Molecular Biosciences and Biotechnology
Specialization: Environmental and Microbial Biotechnology

Admissions: Open Process: Declaration
Min. Total Credits: 120 (111 in core & major + 9 in electives)

UHM General Education Core Requirements
Foundations
<input type="checkbox"/> FW
<input type="checkbox"/> FS
<input type="checkbox"/> FG (A / B / C)
<input type="checkbox"/> FG (A / B / C)
Diversification
<input type="checkbox"/> DA / DH / DL
<input type="checkbox"/> DA / DH / DL
<input type="checkbox"/> DB
<input type="checkbox"/> DP
<input type="checkbox"/> DY
<input type="checkbox"/> DS
<input type="checkbox"/> DS
<i>* See degree, college and major requirements for courses that can also fulfill these.</i>
UHM Graduation Requirements
Focus
<input type="checkbox"/> H
<input type="checkbox"/> E (300+)
<input type="checkbox"/> O (300+)
<input type="checkbox"/> W
<input type="checkbox"/> W
<input type="checkbox"/> W
<input type="checkbox"/> W (300+)
<input type="checkbox"/> W (300+)
Hawaiian / Second Language
<ul style="list-style-type: none"> Any four-course combination of language or 2 social sciences courses and 2 biological or physical science courses <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
Credit Minimums
<ul style="list-style-type: none"> 120 total applicable 30 in residence at UHM 45 upper division (300+ level) credits
Grade Point Average
<ul style="list-style-type: none"> 2.0 cumulative or higher (<i>Note: Other GPAs may be required</i>) Good academic standing

College Requirements
CTAHR Required Set of Interrelated Courses
<input type="checkbox"/> NREM 310
<input type="checkbox"/> Internship or capstone course (MBBE/PEPS/TPSS 499)
Credit Minimums
<ul style="list-style-type: none"> 120 total applicable

*This program sheet was prepared to provide information and does not constitute a contract. See back for major requirements.
 Meet regularly with your major advisor.*

Major Requirements for BS in Molecular Biosciences and Biotechnology

Specialization: Environmental and Microbial Biotechnology

Admission: Open

Application: NA

Min. major credits: 73-77 (80-84 with related requirements)

Min. exit GPA: 2.0 in the major

Requirements

Molecular Biosciences and Biotechnology Related Requirements (7 credits)

- MATH 215*^{FS} or 241*^{FS}
- NREM 220*^{DS}

Molecular Biosciences and Biotechnology Core Courses (50 credits)

- BIOL 171*^{DB} / 171L*^{DY}
- BIOL 172*^{DB} / 172L*^{DY}
- BIOL 275*^{DB} / 275L*^{DY}
- CHEM 161*^{DP} / 161L*^{DY}
- CHEM 162*^{DP} / 162L*^{DY}
- CHEM 272*^{DP} / 272L*^{DY}
- MBBE 304*^E
- MBBE 401
- MBBE 402 / 402L
- ANSC 446, BIOL 375, or PEPS 371
- PHYS 100*^{DP} / 100L*^{DY} or 151*^{DP} / 151L*^{DY} and 152*^{DP} / 152L*^{DY}
- MBBE/PEPS/TPSS 499

Environmental and Microbial Required Courses (8 credits)

- CHEM 273 / 273L
- MICR 351 / 351L

Environmental and Microbial Elective Courses (15-19 credits)

15 credits of the following:

- BE 431
- CHEM 274/274L
- CHEM 445
- GEOG 101/101L
- MICR 431/431L
- MICR 461/461L
- MICR 475/475L
- PEPS 405
- MBBE/PEPS/TPSS 499 credits beyond 3

Notes

CTAHR Office of Academic and Student Affairs: Gilmore 210; (808) 956-8183/(808) 956-6733; acadaff@ctahr.hawaii.edu; www.ctahr.hawaii.edu

MBBE Program: Gilmore 211; (808) 956-6997

MBBE Undergraduate Advisor: Harry Ako, PhD; AgSci 218; (808) 956-2012; hako@hawaii.edu