University of Hawai‘i at Mānoa  
College of Tropical Agriculture and Human Resources Program Sheet 2010-2011  
Bachelor of Science (BS) in Plant and Environmental Biotechnology  
Specialization: Environmental and Microbial Biotechnology  
Admissions: Open    Process: Declaration  
Min. Total Credits: 128 (116 in core & major + 12 in electives)

### UHM General Education Core Requirements

**Foundations**
- FW
- FS
- FG (A / B / C)
- FG (A / B / C)

**Diversification**
- DA / DH / DL
- DA / DH / DL
- DB
- DP
- DY
- DS
- DS

*See degree, college and major requirements for courses that can also fulfill these.*

### UHM Graduation Requirements

**Focus**
- H
- E (300+)
- O (300+)

- W
- W
- W
- W
- W (300+)
- W (300+)

**Hawaiian/Second Language**
- Any four-course combination of language or 2 social sciences courses and 2 biological science courses
  - [ ] [ ] [ ] [ ]

**Credit Minimums**
- 124 total applicable
- 30 in residence at UHM

**Grade Point Average**
- 2.0 cumulative or higher
- Good academic standing

### College Requirements

**CTAHR Required Set of Interrelated Courses**
- NREM 310
- Internship or capstone course (MBBE/PEPS/TPSS 499)

**Credit Minimums**
- 128 total applicable
- 60 non-introductory

### Plant and Environmental Biotechnology Major Requirements

See back for major requirements. Meet regularly with your major advisor.
# Major Requirements for BS in Plant and Environmental Biotechnology

**Specialization:** Environmental and Microbial Biotechnology  
**Admission:** Open  
**Application:** NA  
**Min. major credits:** 76 (83 with related requirements)  
**Min. exit GPA:** 2.0 in the major

## Requirements

### Plant and Environmental Technology Related Requirements (7 credits)
- MATH 215*FS or 241*FS  
- NREM 220*DS

### Plant and Environmental Technology Core Courses (44 credits)
- BIOL 171*DB / BIOL 171*DY  
- BIOL 172*DB / BIOL 172*DY  
- BIOL 275*DB / BIOL 275L*DY  
- CHEM 161*DP / CHEM 161*L*DY  
- CHEM 162*DP / CHEM 162L*DY  
- CHEM 272*DP / CHEM 272L*DY  
- MBBE 304  
- MBBE 401  
- MBBE 402 / MBBE 402L  
- ANSC 446, BIOL 375, or PEPS 371  
- PHYS 100*DP / PHYS 100L*DY or PHYS 151*DP / PHYS 151L*DY and PHYS 152*DP / PHYS 152L*DY  
- MBBE/PEPS/TPSS 499

### Environmental and Microbial Required Courses (17 credits)
- CHEM 273 / CHEM 273L  
- MBBE 412  
- MICR 351 / MICR 351L  
- MICR 485 / MICR 485L

### Environmental and Microbial Elective Courses (15-19 credits)
- 15 credits of the following:
  - BE 431  
  - BIOL 124/124L  
  - CHEM 274/274L  
  - CHEM 445  
  - ENTO 480  
  - GEOG 101/101L  
  - MBBE 420  
  - MBBE 431/431L  
  - MICR 461/461L  
  - MICR 475/475L  
  - PEPS/MBBE 403  
  - 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  
PEB Program: Gilmore 211; (808) 956-6997  
P Eb Undergraduate Advisor: Harry Ako, PhD; AgSci 218; (808) 956-2012; hako@hawaii.edu