University of Hawai‘i at Mānoa  
College of Tropical Agriculture and Human Resources Program Sheet 2012-2013  
**Bachelor of Science (BS) in Plant and Environmental Biotechnology**  
Specialization: Environmental and Microbial Biotechnology  
Admissions: Open  
Process: Declaration  
Min. Total Credits: 120 (120 in core & major + 0 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 (300+)
- W (300+)

**Hawaiian/Second Language**

- Any four-course combination of language or 2 social sciences courses and 2 biological science courses

**Credit Minimums**

- 120 total applicable

**Grade Point Average**

- 2.0 cumulative or higher *(Note: Other GPAs may be required)*
- Good academic standing

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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 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 (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 (11 credits)
- CHEM 273 / 273L
- MBBE 412
- MICR 351 / 351L

#### 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
- MICR 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

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

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