



# University of Hawai'i at Mānoa - Four-Year Academic Plan 2012-2013

## Colleges of Tropical Agriculture and Human Resources

### Bachelor of Science (BS) in Plant and Environmental Biotechnology

Track: Environmental and Microbial Biotechnology

This is a sample academic plan. Students should meet with an academic advisor prior to registration to formulate their own plan.

Year 1	Year 2	Year 3	Year 4
<b>Fall</b>	<b>Fall</b>	<b>Fall</b>	<b>Fall</b>
CHEM 161 (DP) 3 CHEM 161L (DY) 1 BIOL 171 (DB) 3 BIOL 171L 1 H/SL 3 FW 3 FG (A/B/C) 3	CHEM 272 3 CHEM 272L 2 MATH 215 or 241 (FS) 4 MBBE 304 3 PHYS 100/100L or 151/151L and 152/152L 4 DA/DH/DL 3	MBBE 402 4 MBBE 402L 2 MBBE 412 3 PEPS 371 or BIOL 375 or ANSC 446 3	PEB Elective 3 PEB Elective 3 PEB Elective 3 Elective 3
Credits 17	Credits 19	Credits 12	Credits 12
<b>Spring</b>	<b>Spring</b>	<b>Spring</b>	<b>Spring</b>
CHEM 162 3 CHEM 162L 1 BIOL 172 3 BIOL 172L 1 NREM 220 (DS) 3 H/SL 3 FG (A/B/C) 3	CHEM 273 3 CHEM 273L 1 BIOL 275 3 BIOL 275L 1 NREM 310 3 DA/DH/DL 3 DS 3	MBBE 401 3 MICR 351 3 MICR 351L 2 MBBE/PEPS/TPSS 499 6	PEB Elective 3 PEB Elective 3 DS 3 Elective 3
Credits 17	Credits 17	Credits 14	Credits 12
<b>Summer</b>	<b>Summer</b>	<b>Summer</b>	<b>Summer</b>
Credits 0	Credits 0	Credits 0	Credits 0
<b>Total Credits 34</b>	<b>Total Credits 70</b>	<b>Total Credits 96</b>	<b>Total Credits 120</b>

**Notes:**

- Students must take placement exams to be able to register for CHEM 161.
- Students must take 15 credits in Environmental and Microbial Biotechnology from 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; or MBBE/PEPS/TPSS 499 credits beyond 3.
- Students must incorporate all focus requirements into this plan.
- Minimum 45 upper division (300+ course) credits are required.