

Tropical Agriculture and the Environment (TAE)

Environmental Soil Sciences

*UH Manoa requirements are those in effect for the 2017-2018 academic year. Students are advised to consult future UH Manoa catalogs to determine if changes have been made to any requirements.

UHM General Education Core Requirements (three credits each, unless noted otherwise)

College of Tropical Agriculture and Human Resources Requirements

A. Foundations

- (1) FW =Written Communication (ENG 100, ENG 100A, ENG 190, ESL 100 or AMST 111)
- (2) FS = Symbolic Reasoning MATH 215
- (3) FG = Global & Multicultural Perspective (A/ B/ C), first course
FG =Global & Multicultural Perspective (A/ B/ C), second course

G. CTAHR Required Set of Interrelated Courses

- (1) FAMR 380* DS & 380L Research Methodology (4 cr) **OR** NREM 310 Statistics in Agriculture (3 cr)
- (2) TPSS 492 Internship (TPSS 492 (1 cr) + TPSS 492L (3 cr) = 4 credits)

B. Diversification

- (1) DA/DH/DL =Arts, Humanities, & Literature, first course
- (2) DA/DH/DL = Arts, Humanities, & Literature, second course
- (3) DS = Social Sciences, first course
- (4) DS = Social Sciences, second course
- (5) DB = BIOL 171
- (6) DY = BIOL 171L (1cr)
- (7) DB = BIOL 172
- (8) DY = BIOL 172L (1cr)
- (9) DP = CHEM 161 (3cr)
- (10) DP = CHEM 162 (3cr)
- (11) DY = CHEM 161L (1cr)
- (12) DY = CHEM 162L (1cr)

Tropical Agriculture and the Environment (TAE) Requirements (21 Credits)

H. TAE Core

- (1) TPSS 200 Agriculture, Environment, and Society
- (2) BIOL 265 Ecology and Evolutionary Biology or PEPS 210 Introduction to Environmental Science
- (3) TPSS 304 Fundamentals of Soil Science (4)
- (4) TPSS 470 Plant Physiology
- (5) TPSS/470L Plant Physiology Laboratory
- (6) PEPS 421 Foundations of Pest Management (4)
- (7) TPSS/PEPS 499 Directed Research (3)

UHM Graduation Requirements Focus

- (1) H = Hawaiian, Asian & Pacific
- (2) E = Contemporary Ethical Issues (300+) will be satisfied by taking any one of the following: TPSS 416 Introduction to Social, Ethical, and Political Issues Associated with Biotechnology; PEPS 310 Environment and Agriculture; PEPS 350 Invasive Pest Species; PEPS 451 Environmental Law; MBBE/BIOL 304 Biotechnology: Science and Ethical Issues; CMB 351/BIOL 340 Genetics, Evolution and Society
- (3) Oral Communication (300+)
- (4) Writing Intensive (W)
 - a. First 100 or 200-level course
 - b. Second 100 or 200-level course
 - c. TPSS 200, Tropical Crop Science, third course
 - d. Fourth course, PEPS 421
 - e. Fifth course, TPSS 492L, Internship

Certificate in Agribusiness Management *

- (1) ECON 130 Principles of Economics
- (2) TPSS 322 Farm & Food Marketing or BUS 312
- (3) TPSS 341 Managerial Accounting
- (4) TPSS 351 Enterprise Management
- (5) TPSS 429 Spreadsheet Modeling for Business & Economic Analysis

Graduation Requirements

E. Grade Point Average (GPA)

- (1) 2.0 cumulative or higher
- (2) Good academic standing

F. Credit Minimums

- (1) 120 Credits - Total Applicable
- (2) 30 Credits in residence at UHM Graduation
- (3) 45 Upper Division (300+) credits

D. Hawaiian/Second Language - *Alternative*

Any four (4)-course combination of Languages, TPSS, PEPS or other approved related course not used to satisfy requirements in the TAE major.

- (1) First course
- (2) Second course
- (3) Third course
- (4) Fourth course

Environmental Soil Science

Fundamental courses (Complete all 4 courses)

- (1) TPSS 435 Environmental Soil Chemistry
- (2) TPSS 450 Nutrient Mgmt Soils & Plants (4)
- (3) TPSS 475 Plant Nutrient Diagnosis
- (4) NREM 477 Geographic Information Systems for Resource Managers (4)

B. Electives (Select course 18 credits minimum)

- (1) NREM 301 Natural Resources management (4)
- (2) NREM 461 Soil Erosion & Conservation
- (3) TPSS 460 Plant Soil Atmosphere Physics
- (4) TPSS 463 Irrigation and Water Management
- (5) GEOG 401 Climate Change
- (6) GEOG 402 Agricultural Climatology
- (7) GEOG 405 Water in the Environment
- (8) GG 101 Dynamic Earth
- (9) GG 103 Geology of the Hawaiian Islands
- (10) GG 402 Hawaiian Geology
- (11) GG 425 Environmental Geochemistry
- (12) MICR 485 Microbes and their Environment + MICRO 485L
- (13) PEPS 410 Sustainable Soil and Plant Health Management (2)