

Department of Plant, Soil, and Insect Sciences: Concentration Requirements

Sustainable Food & Farming

I. Core Requirements

A. Biological Science

- Botany PLSOILIN 102
- or* Plant Biology BIOLOGY 103 4 cr.
- Soil Science PLSOILIN 105 4 cr.

B. Ecosystems Studies

- Select one of the following courses. 3 cr.
- Intro Environmental Biology (BS) ENVIRSCI 101
- Plants, Soils and the Environment PLSOILIN 115
- Principles of Environmental Biology ENVIRSCI 214
- Society and Environment (SI) NRC 100
- Introductory Ecology BIOLOGY 287

C. Math, Statistics and Reasoning

- Algebra/Anal. Geom/Trig (R1) MATH 104
- or* Pre-CalcAlgebra/Anal. Geom/Trig MATH 101/ 102 3-4 cr.
- Analytical Reasoning (R2) (approval of advisor) 3 cr.

D. Chemistry

- General Chemistry CHEM 110 **or** 111 4 cr.

E. Junior Writing

- Technical Writing PLSOILIN 380
- or* Writing for Sustainability PLSOILIN 382 3 cr.

TOTAL CORE

24 - 25 cr.

II. Concentration Specific Requirements

A. Food Systems Course

- Community Food Systems PLSOILIN 397C 3 cr.

B. Crop Production and Pest Management 18+ credits

Students must select **six** courses in this area, with at least five at or above the 300 level. At least two courses must come from the Pest Management area.

Crop Science

- Organic Farming and Gardening (BS) PLSOILIN 120
- Plant Propagation PLSOILIN 200
- Sustainable Agriculture PLSOILIN 265
- Herbs, Spices, & Medic. Plants (BS) PLSOILIN 280

<input type="checkbox"/> Deciduous Orchard Science	PLSOILIN 300
<input type="checkbox"/> Small Fruit Production	PLSOILIN 305
<input type="checkbox"/> Greenhouse Management	PLSOILIN 315
<input type="checkbox"/> Vegetable Crop Production	PLSOILIN 325
<input type="checkbox"/> Soil and Crop Management	PLSOILIN 350
<input type="checkbox"/> Hydroponics	PLSOILIN 365
<input type="checkbox"/> Tropical Agriculture	PLSOILIN 370
<input type="checkbox"/> Intro Plant Physiology	PLSOILIN 397P
<input type="checkbox"/> Plant Nutrition	PLNTSOIL 530
<input type="checkbox"/> Soil Fertility	PLNTSOIL 580

Pest Management – *select at least two pest mgt courses below*

<input type="checkbox"/> Weed Management	PLSOILIN 310
<input type="checkbox"/> Insect Biology	PLSOILIN 326
<input type="checkbox"/> Pesticides, Environ. & Public Policy	PLSOILIN 342
<input type="checkbox"/> Insect Ecology & Management	PLSOILIN 397K
<input type="checkbox"/> Disease Ecology & Management	PLSOILIN 510
<input type="checkbox"/> General Plant Pathology	PLNTSOIL 505
<input type="checkbox"/> Biological Control	ENTOMOL 523
<input type="checkbox"/> Insect-Plant Interactions	ENTOMOL 597A

C. Restricted Electives

(24 cr.)

Students in Sustainable Food and Farming must select at least 24 credits across three categories: Biophysical Systems, Economic Systems and Social Systems. Select at least one course from each category, and a minimum of 18 credits from courses at or above the 300-level. **Note:** *Courses may also be used to meet a General Education requirement.* Courses may be selected from other academic departments at the University of Massachusetts or from one of the other Five Colleges when they add value to the area of study. Examples of courses are listed below.

Up to 12 credits of these requirements may be satisfied by an internship or independent study (such as PLSOILIN 396/496 or 398/498) with approval of the Academic Advisor and the Undergraduate Director.

Examples of Restricted Electives for Sustainable Food and Farming

Students may use other courses with advisor's approval.

1. Biophysical Systems

Additional courses in PLSOILIN/PLNTSOIL/ENTOMOL

Plant Ecology	BIOLOGY 421
Sustainable Cities	ENVIRDES 591B
Economic Geography	GEO-SCI 360
Land Use and Society	GEO-SCI 362
Human Impact on the Natural Env.	GEO-SCI 420
Sense of Place and Environ. Perception	GEO-SCI 444
Human Dimensions in Natural Res. Mgmt.	NRC 382

2. Economic Systems

Political Economy of the Environment	ECON 308
Economic Development	ECON 366
Economic Geography	GEO-SCI 360
Principles of Management	MANAGT 301
Human Resource Management	MANAGTMT 314
Fundamentals of Marketing	MARKETNG 301
Environmental Economics	RESECON 262
Non-profit and Social Marketing	MKTG 460
Intro Statistics	RESECON 211 or 212
Natural Resource Economics	RESECON 263
Small Business Finance	RESECON 324
Food Marketing	RESECON 241

3. Social Systems;

Farm Animal Care and Welfare	ANIMLSCI 360
Political Anthropology	ANTHRO 336
Grassroots Community Development	ANTHRO 397H
Introduction to Multicultural Education	EDUCATION 377
Education for Community Development	EDUCATION 556
Ecological Cities	GEO-SCI 697P
American Environmental History	HISTORY 383
Sustainable Living	PLSOILIN 285
Pesticides, the Environ. & Public Policy	PLSOILIN 342
Environmental Policy	POLISCI 382
Land and Resource Policy	POLISCI 383
Community Development	PUBHLTH 602
Principles of Group Dynamics	PUBHLTH 603
Social Change	SOCIOL 327
Social Movements	SOCIOL 329
Sociology and Ecology of Community	SOCIOL 565
Natural Resource Policy & Admin.	NRC 409

D. Advanced Courses in Plant, Soil and Insect Sciences

Students must select any two additional courses at the 500-level or higher adding up to six (6) credits from PLNTSOIL or ENTOMOL course listing that are not being used to satisfy a previously listed requirement.

(6 cr.)

E. Minimum Required Credits in the Department

Note that students must take a minimum of 30 credits from within the Department of Plant, Soil and Insect Sciences.

Total for the Sustainable Food and Farming Concentration

75-76 cr.