SUSTAINABLE AGRICULTURE AND FOOD SYSTEMS MAJOR (B.A.)

https://colsa.unh.edu/agriculture-nutrition-food-systems/program/ba/sustainable-agriculture-food-systems-major

Description

The Sustainable Agriculture & Food Systems B.A. provides students with a broad base of knowledge and experiences with modern agriculture and food systems. Sustainable Agriculture and Food Systems is an interdisciplinary field comprising the social, physical, and life sciences and beyond. Agriculture is key to solving many of the major challenges facing the world; such as producing food to meet the needs of an ever-growing population while conserving land, water, and soil resources.

Our students get hands-on experience in applied coursework, and we encourage our students to conduct research alongside faculty. Our students become practitioners and entrepreneurs of agricultural and food businesses, researchers and policy-makers at state/federal agencies and non-profit organizations, laboratory technicians, and agricultural educators. Some go on to obtain an advanced degree in the agricultural sciences.

Requirements

The SAFS B.A. program structure includes FOUR major components: foundation courses, courses in a student-designed emphasis area, program elective courses, and a capstone. You must earn a minimum grade of C- in all courses required for the major.

Foundation courses include 36 credits, which satisfy 5 of the University Discovery requirements.

Student-Designed Emphasis courses include 20 credits that make up a cohesive emphasis or focus area. Courses may be selected from the List of Approved Program Electives, but do not need to be on that list. An appropriate group of courses transferred from a completed 2-year program such as TSAS could serve as an emphasis area. Each student will define their emphasis area in consultation with their advisor and submit it to the SAFS program committee for approval prior to the start of their 6th semester.

Program Elective courses include 20 credits, chosen from the List of Approved Program Elective courses.

A Capstone experience must take place during the senior year. There are two capstone options: SAFS 733 Advanced Topics in Sustainable Agriculture or ANSC 750 Collaborative Farm Design and Development. Your capstone MAY be counted towards elective or emphasis credits.

Of the Student-Designed Emphasis and Program Elective courses, at least 16 credits (not counting the capstone) must be earned at the 600-700 level.

Program Electives

Select 20 credits from the approved electives list.

Senior Capstone

Select one from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 750</td>
<td>Collaborative Farm Design and Development</td>
<td></td>
</tr>
<tr>
<td>SAFS 733</td>
<td>Advanced Topics in Sustainable Agriculture</td>
<td></td>
</tr>
</tbody>
</table>

1 Note: Some courses (e.g. genetics, microbiology) require CHEM 403 and CHEM 404 as a prerequisite. If you intend to take these courses, you should take CHEM 403 rather than CHEM 411.

University Requirements

In addition to meeting the SAFS major requirements, students must satisfy all University requirements including those that pertain to the minimum number of credits, grade-point average, writing-intensive courses, the Discovery Program, and foreign language (only for B.A. students).

Approved Electives

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AAS 402</td>
<td>Introduction to Livestock and Poultry Management</td>
<td>2</td>
</tr>
<tr>
<td>AAS 421</td>
<td>Large Animal Behavior and Handling Techniques</td>
<td>2</td>
</tr>
<tr>
<td>AAS 423</td>
<td>Dairy Selection</td>
<td>2</td>
</tr>
<tr>
<td>AAS 424</td>
<td>Animal Law and Regulations</td>
<td>3</td>
</tr>
<tr>
<td>AAS 425</td>
<td>Introduction to Dairy Herd Management</td>
<td>4</td>
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<tr>
<td>AAS 432</td>
<td>Introduction to Forage and Grassland Management</td>
<td>3</td>
</tr>
<tr>
<td>AAS 439</td>
<td>Fundamentals of Animal Health</td>
<td>2</td>
</tr>
<tr>
<td>AAS 535</td>
<td>Animal Nutrition</td>
<td>3</td>
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<tr>
<td>AAS 540</td>
<td>Animal Breeding</td>
<td>3</td>
</tr>
<tr>
<td>AAS 574</td>
<td>Dairy Cattle Disease Seminar</td>
<td>2</td>
</tr>
<tr>
<td>ANSC 510</td>
<td>Integration of Culture and Agriculture in Ireland: Past, Present, and Future</td>
<td>2/4</td>
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<tr>
<td>ANSC 546</td>
<td>Animal Business Applications</td>
<td>4</td>
</tr>
</tbody>
</table>
ANSC 600 Field Experience 1-4
ANSC 602 Animal Rights and Societal Issues 4
ANSC 605 Poultry Production and Health Management 4
ANSC 609 Principles of Animal Nutrition 4
ANSC 612 Genetics of Domestic Animals 4
ANSC 625 Animal Diseases 4
ANSC 650 Dairy Industry Travel Course 1
ANSC 698 Cooperative for Real Education in Agricultural Management (CREAM) 4
ANSC 701 Physiology of Reproduction 4
ANSC 708 Ruminant Nutritional Physiology 3
ANSC 710 Dairy Nutrition 4
ANSC 715 Physiology of Lactation 4
ANSC 724 Reproductive Management and Artificial Insemination 4
ANSC 727 Advanced Dairy Management I 4
ANSC 728 Advanced Dairy Management II 4
ANSC 750 Collaborative Farm Design and Development 4
ANSC 795 Investigations 1-4
BIOL 409 Green Life: Introducing the Botanical Sciences 4
BIOL 510 Mushrooms, Molds, and Mildews: Introduction to the Fungal Kingdom 4
BIOL 541 Ecology 4
BIOL 566 Systematic Botany 4
BIOL 701 Plant Physiology 4
BIOL 704 Plant-Microbe Interactions 3
BIOL 720 Plant-Animal Interactions 4
BIOL 752 New England Mushrooms: a Field and Lab Exploration 4
BMS 503 General Microbiology 3
BMS 504 General Microbiology Laboratory 2
CAN 407 Hospitality Sanitation and Safety 1
CEP 415 Community Development Perspectives 4
CHE 410 Energy and Environment 4
ECOG 401 Introduction to Ecogastronomy 4
EREC 600 Field Experience 1-4
EREC 601 Agribusiness Economics and Management 4
EREC 680 Agricultural and Food Policy 4
EREC 760 Ecological-Economic Modeling for Decision Making 4
FORT 564 Arboriculture 3
FORT 576 Forest Products 4
FORT 577 Forest Harvesting Systems 4
FORT 579 Forest Fire Control and Use 2
GEN 772 Evolutionary Genetics of Plants 4
GEN 774 Techniques in Plant Genetic Engineering and Biotechnology 4
GEOG 670 Climate and Society 4
HMGT 403 Introduction to Food Management 4
HMGT 570 International Food and Culture 4
HT 554 Sustainable Irrigation and Rain Harvesting 3
MKTG 550 Survey of Marketing 4
NR 425 Field Dendrology 4
NR 435 Contemporary Conservation Issues and Environmental Awareness 4
NR 504 Freshwater Resources 4
NR 506 Forest Entomology 4
NR 527 Forest Ecology 4
NR #542 Forestland Measurement and Mapping 1
NR 602 Natural Resources and Environmental Policy 4
NR #621 Field Description of Soils 3
NR 643 Economics of Forestry 4
NR 650 Principles of Conservation Biology 4
NR 701 Ecological Sustainability and Values 4
NR 706 Soil Ecology 4
NR 729 Silviculture 4
NR #735 Land Conservation Principles and Practices 4
NR 749 Forest Inventory and Modeling 4
NR 760 Geographic Information Systems in Natural Resources 4
NR 761 Environmental Soil Chemistry 4
NR 765 Community Ecology 4
NR 782 Forest Health in a Changing World 4
NR #783 Forest Communities of New Hampshire 4
NR 785 Systems Thinking for Sustainable Solutions 4
NUTR 400 Nutrition in Health and Well Being 4
NUTR 550 Food Science: Principle and Practice 4
NUTR 600 Field Experience in Nutrition 1-4
NUTR 720 Community Nutrition 4
NUTR 730 From Seed to Sea: Examining Sustainable Food Systems 4
NUTR 795 Investigations 1-4
RMP 724 Grantsmanship, Evaluation, and Research 4
SAFS 410 A Taste of the Tropics 4
SAFS 415 Introduction to Brewing Art and Science 4
SAFS 510 Agriculture and Development in the Neotropics 4
SAFS 515 Technical Brewing 4
SAFS 517 Advanced Aspects of Brewing 4
SAFS 600 Field Experience 0
SAFS 601 Fruit Crop Production 4
SAFS 632 Urban Agriculture 4
SAFS 651 Plant Pathology 4
SAFS 670 Systems Thinking: Land Use Capability and Sustainability 4
SAFS 671 Agroecology and Sustainable Land Management 4
SAFS 672 Pathways to Sustainable Agriculture and Food Systems 4
SAFS 673 Agricultural Production and Business Practice 4
SAFS 679 Food Production Field Experience I 4
SAFS 680 Food Production Field Experience II 4
SAFS 689 Greenhouse Management and Operation 4
SAFS 733 Advanced Topics in Sustainable Agriculture 4
SAFS 740 Aquaponics 4
SAFS 760 Insect Pest Management 4
SAFS 795 Investigations 1-4
<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>SAFS 799</td>
<td>Honors Senior Thesis</td>
<td>1-4</td>
</tr>
<tr>
<td>ZOOL 610</td>
<td>Principles of Aquaculture</td>
<td>4</td>
</tr>
<tr>
<td>ZOOL 772</td>
<td>Fisheries Biology: Conservation and Management</td>
<td>3</td>
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