Food Systems Major B.S.
Fall 2015

Common Food Systems Requirements (common to all tracks):

A. Integrated Food Systems Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRO 1660W</td>
<td>First-Year Colloquium/Experience in Agroecosystems (2cr, F/S)</td>
<td></td>
</tr>
<tr>
<td>FDSY 2101</td>
<td>Plant Production Systems (3cr, S) prereq one of: Biol 1001, 1009, Hort 1001, Agro 1101</td>
<td></td>
</tr>
<tr>
<td>BBE 3201</td>
<td>Sustainability of Food Systems: A Life Cycle Perspective&lt;sup&gt;GP&lt;/sup&gt; (3cr, F/S/Su)&lt;sup&gt;online&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>APEC 3202</td>
<td>An Introduction to the Food System: Analysis, Management and Design (3cr, F)&lt;sup&gt;IL&lt;/sup&gt; prereq ApEc 1101 or Econ 1101</td>
<td></td>
</tr>
<tr>
<td>FDSY 4101</td>
<td>Holistic Approaches to Improving Food System Sustainability (3 cr, S) prereqs ApEc 3202, BBE 3201</td>
<td></td>
</tr>
<tr>
<td>CFAN 3096</td>
<td>Making the most of your Internship&lt;sup&gt;EL&lt;/sup&gt;(1 cr, S) prereq prior secured internship or HORT 4096W Professional Experience Program: Internship&lt;sup&gt;EL&lt;/sup&gt; (2 cr, F/S) or CFAN 2201 Secure and Succeed in Internships&lt;sup&gt;EL&lt;/sup&gt; (2cr, S)</td>
<td></td>
</tr>
</tbody>
</table>

B. Communications –

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRIT 1301</td>
<td>University Writing (4cr, F/S)</td>
<td></td>
</tr>
<tr>
<td>AFEE 2421</td>
<td>Communication for Agriculture, Food, and the Environment (3 cr, F/S)</td>
<td></td>
</tr>
<tr>
<td>or COMM 1101</td>
<td>Introduction to Public Speaking&lt;sup&gt;CIV&lt;/sup&gt; (3 cr, F/S)</td>
<td></td>
</tr>
<tr>
<td>WRIT 3562W</td>
<td>Technical and Professional Writing (4cr, F/S)</td>
<td></td>
</tr>
</tbody>
</table>

C. Physical and Biological Sciences –

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRO 1101</td>
<td>Biology of Plant Food Systems (4cr, F/S)</td>
<td></td>
</tr>
<tr>
<td>or HORT 1001</td>
<td>Plant Propagation (4cr, F/S)</td>
<td></td>
</tr>
<tr>
<td>or BIOL 1009</td>
<td>General Biology (4cr, F/S)</td>
<td></td>
</tr>
<tr>
<td>or BIOL 1001</td>
<td>Introduction to Biology I (4cr, F/S)</td>
<td></td>
</tr>
<tr>
<td>FSCN 1112</td>
<td>Principles of Nutrition (3cr, F/S)</td>
<td></td>
</tr>
<tr>
<td>CHEM 1061</td>
<td>Chemical Principles I and</td>
<td></td>
</tr>
<tr>
<td>and CHEM 1065</td>
<td>Chemical Principles I Lab (4cr, F/S)</td>
<td></td>
</tr>
<tr>
<td>or CHEM 1015</td>
<td>Introductory Chemistry: Lecture</td>
<td></td>
</tr>
<tr>
<td>and CHEM 1017</td>
<td>Introductory Chemistry: Laboratory (4cr, F/S)</td>
<td></td>
</tr>
</tbody>
</table>

D. Mathematical Thinking –

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1031</td>
<td>College Algebra and Probability (F/S)</td>
<td></td>
</tr>
<tr>
<td>or MATH 1051</td>
<td>Pre-calculus 1 (F/S)</td>
<td></td>
</tr>
</tbody>
</table>

E. Social Sciences –

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>APEC 1101</td>
<td>Principles of Microeconomics&lt;sup&gt;GP, SS&lt;/sup&gt; (F/S)</td>
<td></td>
</tr>
<tr>
<td>or ECON 1101</td>
<td>Principles of Microeconomics&lt;sup&gt;GP, SS&lt;/sup&gt; (F/S)</td>
<td></td>
</tr>
</tbody>
</table>

F. Liberal Education Core Requirements not filled by major courses

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Humanities</td>
<td>3 cr</td>
</tr>
<tr>
<td>Literature</td>
<td>3 cr</td>
</tr>
<tr>
<td>Historical Perspective</td>
<td>3 cr</td>
</tr>
</tbody>
</table>
G. Themes of Liberal Education (complete 2 besides GP and E) 12 credits
   ____ CIV = Civic Life and Ethics (3 cr)
   ____ DSJ = Diversity and Social Justice in the United States (3 cr)
   ____ E = Environment (3 cr)
   _x_ GP = Global Perspectives (3 cr) satisfied with BBE 3201
   ____ TS = Technology & Society (3 cr)

I. Interdisciplinary Learning (IL) requirement satisfied with ApEc 3202 0 additional credits
J. Experiential Learning (EL) requirement satisfied with CFAN 4096, Hort 4096 or CFAN 2201 0 additional credits

Total Common Food Systems Requirements: 65 credits

Food Systems Tracks:
Organic and Local Food Production Track

Required courses:
   ____ APS 4072 What Does It Mean to Be Green? Growing Organic (3 cr, F) prereq Biol 1001, 1009 or Hort 1001
   ____ CFAN 3333 Insects, Microbes and Plants (3 cr, F)
   ____ HORT 1001 Plant Propagation (if not taken as Biol. Sci. requirement) (4 cr, F/S)
   ____ HORT 2100 Agricultural Biochemistry (3 cr, F) prereqs Chem 1015 or 1061
   ____ HORT 3005W Environmental Effects on Horticultural Crops (4 cr, S) prereq Hort 1001 or BIOL 1009, soph
   ____ HORT 3131 Student Organic Farm Planning, Growing, Mkting (4 cr, S) prereq Hort 1001 or BIOL 1001 or BIOL 1009
   ____ SOIL 2125 Basic Soil Science (4 cr, F/S) prereq Chem 1015 or 1061

Choose at least 9 credits from the following list:
   ____ FDSY 2102 Diversity of Agricultural Production Systems (3 cr, summer in Morris),
   ____ HORT 1015 Woody and Herbaceous Plants (4 cr, F)
   ____ HORT 4015 Advanced Woody & Herbaceous Plant Topics (1 cr, F) prereq Hort 1015
   ____ HORT 4141W Plant Production I (4 cr, F) prereq Hort 1001 or 1015
   ____ HORT 4441 Plant Genetics and Breeding (4 cr, S) prereq Biol 1009 or equiv
   ____ HORT 4471W Applications of Biotechnology to Plant Improvement (4 cr, F) prereq Biol 1009 or equiv
   ____ HORT 4461 Horticultural Marketing (3 cr, F) prereq APEC 1101 or ECON 1101
   ____ HORT 4601 Aquaponics: Integrated Fish and Plant Food Systems (4 cr, S) prereq Biol 1009 or equiv, Chem 1015&1017 or 1061&1065
   ____ HORT 5031 Organic Viticulture and Fruit Production (3 cr, F) prereq Hort 1001, 3005
   ____ HORT 5032 Organic Vegetable Production(3 cr, S) prereq Hort 3005, ENT 1005, PLPA 2001, SOIL 2125
   ____ HORT 5051 Plant Production II (4 cr, S) prereq Hort 1001, 1015
Food Systems Tracks:

Agroecology Track

Required courses:

- SOIL 2125  Basic Soil Science (4 cr, F/S)  prereq Chem 1015 or 1061
- HORT 2100  Agricultural Biochemistry (3 cr, F)  prereq Chem 1015 or 1061
  - or BIOC 3021  Biochemistry (3 cr, F)  prereqs Chem 1061/1065, 1062/1066, 2301, Biol 1009
- AGRO 4005  Applied Crop Physiology and Development (4 cr, F/S)
  - prerequisite Chem 1015 or Chem 1061, 8 cr in biology or plant science
  - or HORT 3005W  Environmental Effects on Horticultural Crops (4 cr, S)
    - prerequisite Hort 1001 or BIOL 1009, soph
- ESPM 3108  Ecology of Managed Systems (3 cr, F)  prereq BIOL 1001 or BIOL 1009 or HORT 1001

Choose at least 16 credits from the following, of which at least 9 credits must be upper division (3xxx or above):

- AGRO 2501  Plant Identification for Urban and Rural Landscapes (3 cr, F)
- APEC 4103  World Food Problems (3 cr, F)
- AGRO 4505  Biology, Ecology, and Management of Invasive Plants (3 cr, S)
  - prerequisite Agro 4005, Bio 3002 or equiv, Soil 2125, Agro 2501 or Hort 1001
- AGRO 4888  Issues in Sustainable Agriculture (2 cr, F)
  - prerequisite Agro 1103, Soil 1125 or 2125 or equiv
- CHEM 2301  Organic Chemistry I (3 cr, F/S)  prerequisite Chem 1062/1066
- CFAN 3333  Insects, Microbes and Plants (3 cr, F)
- ENT 5341  Biological Control of Insects and Weeds (3 cr, S)
  - prerequisite Ent 3001, Biol 1009, EEB 3001
- HORT 1014  Edible Landscapes (3 cr, F/S)
- HORT 5071  Ecological Restoration (4 cr, F)
  - prerequisite one college course in ecology, one college course in plant science or botany

Credits in Agroecology Track:  30 credits

Credits in Organic and Local Food Production Track: 30 credits ¹

¹ when HORT 1001 is taken as the biological science requirement, otherwise 34 credits
Food Systems Tracks:
Consumers and Markets Track

Select at least 30 credits from the following, of which at least 16 must be upper division (3xx or above):

___ ANSC 1511 Food Animal Products for Consumers (3 cr, F)
___ APEC 3071 Agriculture and Economic Growth in Developing Countries (3 cr, F)
             prereq ApEc 1101, 1102, Econ 1101, 1102
___ APEC 3411 Commodity Marketing (3 cr, F)
             prereq ApEc 1101 or Econ 1101
___ APEC 3451 Food and Agricultural Sales (3 cr, S)
             prereq ApEc 1101 or Econ 1101
___ APEC 3501 Agribusiness Finance (3 cr, F)
             prereq ApEc 1251 or Acct 2050
___ APEC 3551 Entrepreneurship Fund. for Value-Added Rural Business (3 cr, F)
             prereq ApEc 1101
___ APEC 3811 Principles of Farm Management (3 cr, F)
             prereq ApEc 1101 or Econ 1101
___ APEC 4103 World Food Problems \textsuperscript{GP,ID} (3 cr, F)
___ APEC 4451W Food Marketing Economics \textsuperscript{CIV} (3 cr, F)
             prereq ApEc 1101 or Econ 1101, MKTG 3001
___ APEC/HORT 4461 Horticultural Marketing (3 cr, F)
             prereq ApEc 1101 or ECON 1101
___ APEC 4481 Futures and Options Markets (3 cr, S)
             prereq ApEc 3001 or Econ 3101, AnSc 2211 or OMS 1550 or Stat 3011
___ APEC 4821W Business Economics & Strategy (3 cr, S)
             prereq ApEc 3002, [ApEc 3501 or FINA 3001], MGMT 3001
___ APEC 3840 Cooperative Organization (3 cr, S)
             prereq ApEc 1101 or Econ 1101
___ FSCN 1011 Science of Food and Cooking (4 cr, F/S)
___ FSCN 1102 Food Safety Risk and Technology \textsuperscript{CIV} (3 cr, S)
___ FSCN 2001 Healthy Foods Healthy Lives: A Food Syst. Appr. to Cooking (3 cr, S)
___ FSCN 2021 Introductory Microbiology (4 cr, F/S)
             prereq BIOL 1009, CHEM 1015
___ FSCN 3102 Introduction to Food Science (3 cr, F)
             prereq CHEM 1062 and 1066
___ FSCN 3612 Life Cycle Nutrition (3 cr, F)
             prereq FSCN 1112, Chem 1062 and 1066
___ FSCN 3615 Socio-cultural Aspects of Foods \textsuperscript{GP} (3 cr, S)
___ FSCN 4131 Food Quality (3 cr, F)
             prereq FSCN 1102
___ HORT 1031 Vines and Wines: Introduction to Viticulture and Enology (3 cr, F/S)
             prereq 21 yrs of age by date of 1st class meeting

Credits in Consumers and Markets Track: 30 credits