New Undergraduate Course Approval Cover Form
Montana State University

This four-page form collects basic information about the proposed new course, provides information on the approval process, and includes all required approvals. Additional information (see INFO sheet) is also required as part of the New Course Packet.

Proposed New Course Information

Requested Rubric, Course Number, Core Designation (if needed):

Course Title:
Food System Resilience, Vulnerability and Transformation

Abbreviated Course Title (≤ 30 chars):
Spring 2014

First Semester to be Offered:
Submitted by:
Selena Ahmed
406.994.5640
selena.ahmed@montana.edu

Submitter's Contact Info: Phone, Email:
Instructor:
Selena Ahmed
Health and Human Development
Education, Health and Human Development

Check here if “Special Topics” x91 course:

Proposed New Course Information

This course was taught Spring 2014 as SFBS 491.

Course Review Process

The Chair of the College Curriculum Committee signs to indicate College academic approval.
The College Dean signs to indicate that adequate resources are available to offer the course. Supporting information (Dean's Statement) is typically required.
The New Course Packet (as PDF) is uploaded to the Provost's Office server for distribution to other committees.
Course requests are sent to Curriculum and Program Committee (CPC). Core reviews are sent to appropriate Core Subcommittee. Committees work in parallel when possible to speed approval process. Special topics courses (291, 491) skip the CPC review (limited to two years.)

Provost's Office reviews the new course request. New courses are submitted to MUS for Common Course Number (CCN) review. Dean and Department informed upon approval.
Approved new course sent to Registrar for inclusion in the Catalog and Schedule of Classes

Note: This diagram illustrates the typical flow path, but at any review step there can be a request for additional information or modifications. Careful review in early steps is the best way to speed the overall process. * Special topics courses (x91) require fewer signatures, but cannot be offered more than two times without committee review.
INFORMATION NEEDED FOR COMMON COURSE NUMBERING

The process for identifying a common course number for a new course is as follows:

1. Course learning outcomes are prepared for the new course.
2. The person submitting the new course request looks at the CCN website to see if a course with similar outcomes already exists in the MUS system.

   www.mus.edu/Tools/CCN/ccn_default.asp

   • If a course exists with at least 80% of the same outcomes, the course is considered “equivalent” to the proposed new course, and the new course should use the existing rubric and course number.
   • If no “equivalent” course is found, the person submitting the new course request should identify a unique course number that has not been used by any other course in the MUS system.

3. The requested rubric and course number are submitted as part of the new course packet.
4. The Provost’s Office submits the learning outcomes and the requested rubric and course number to the MUS to have a course number assigned to the course. (This will typically be the requested course number, but it could be changed.)
5. The assigned common course number is reported back to the person submitting the new course request.

Requested Rubric, Course Number, Core Designation (if needed):

   SFBS 466
   Food System Resilience, Vulnerability and Transformation

   Course Title: Food System Resilience, Vulnerability and Transformation
   Abbrev. Course Title (≤ 30 char):
   Credits:
   Department Offering Course:
   College: Health and Human Development

   Education, Health and Human Development

Is this course “equivalent” to a course in the MUS System?:

   Yes ☐ No ☐

   Learning Outcomes for the Course:

   A. Understand how global environmental change, markets, and policy impacts agro-ecosystems, diets and community health.

   B. Apply higher-level systems thinking to identify socio-ecological variables that increase the resilience of food systems to global environmental change, markets, and policy.

   C. Acquire skills in conducting systematic literature reviews towards enhancing research capacity and ability to design evidence-based management and policies towards sustainable food systems.
INFORMATION REQUIRED BY THE REGISTRAR

The data needed to enter the new course into the MSU Catalog and Schedule of Classes is collected on this page. Once the new course has been approved, this page is automatically forwarded to the Registrar for data entry.

Assigned Rubric, Course Number, Core Designation (if needed):

Course Title (for Catalog):

Course Title (for Schedule of Classes, 30 characters, max.):

First Semester to be Offered:

Restricted Entry/Consent of Instructor Required: ☐ Yes ☐ No

Instructor’s GID (last 4 digits only):

Department Offering Course:

College:

Is the requested course number available? (χx155 to check): ☐ Yes ☐ No

Frequency of course offering: ☑ Annually ☐ Alternate Years, starting __________

Semester(s) offered (check all that apply): ☐ Summer ☐ Fall ☐ Spring

Summer Options (check all that apply): ☐ First 6 weeks ☐ Second 6 weeks ☐ 12 weeks

Credits by mode of instruction: Lecture: ________

Seminar: ________

Independent Study: ________

Lab/Studio: ________

Recitation/Discussion: ________

TOTAL CREDITS: ________

Primary Mode(s) of Delivery: ☑ Face-to-face ☑ Web-Enhanced (small on-line comp.)

On-Line Only ☐ Blended (significant on-line portion)

Time and Location – Call the Registrar’s Office at x4155 to find a time and location for the course.

Assigned Day(s): ☐ M ☐ Tu ☑ W ☐ Th ☐ F ☐ Sa ☐ Su

Assigned Time(s): Evening

Assigned Building: Herrick Hall

Assigned Room: ________

Capacity (room capacity, or enrollment “cap”): 50

Co- and Pre-Requisites – Courses numbered 200 and above are normally expected to have prerequisites. When listing multiple prerequisites, please separate courses with “and” if both are required, or “or” if only one is required.

Prerequisite(s):

Co-Requisite(s):

Course Description – Provide a course description of 40 words or less for the MSU Catalog.

In this seminar and literature-review based course, we will examine the impacts of global environmental change, policy, and markets on agro-ecosystems, diets and community health within the framework of systems theory.
DEAN’S STATEMENT

The reviewing committees are being asked to take a closer look at the resources required for each proposed new course. In many cases new courses will replace existing courses and the new course request is effectively resource neutral, however that is not always the case. For example, a new elective course that would result in distributing an existing student population across a larger number of courses would represent a significant increase in expenditures for the new course, and no increase in total student credit hours. A funding mechanism for such a course would need to be identified. The Dean’s Statement is the place to document how the costs of the proposed new course will be covered.
FOOD SYSTEM RESILIENCE, VULNERABILITY AND TRANSFORMATION
SFBS 466

Instructor: Selena Ahmed, PhD, Assistant Professor of Sustainable Food Systems
Email: selena.ahmed@montana.edu

Class meeting time: Wednesday 5:10 pm – 8 pm
Class location: Herrick Hall 314
Class website: https://ecat.montana.edu/ > For all course announcements and materials

Office location: Romney Gym Room #301B
Office hours: Tuesday 12:30 – 2:30 pm or by appointment
Mailbox: HHD Advising – 121 Marga Hosaeus Fitness Center

Prerequisites: Graduate-level standing in the SFS program OR Senior-level standing in the SFBS major including completion of the following courses: SFBS 146, SFBS 298, NUTR 221C and NUTR 226.

1. COURSE DESCRIPTION
How does global environmental change impact food systems? What models for sustainability and community health can we adapt from indigenous food systems? What ecological and cultural factors enhance resilience and support transformation of food systems?

In this seminar and literature-review based course, we will examine these questions within the framework of systems theory. This course will start with an overview of how global environmental change impacts agro-ecosystems. Next, we will turn our attention to the social science literature to understand farmer responses and adaptation to global environmental change. We will then assess effects of global environmental change on diets through an exploration of indigenous diets around the world and factors that resist or encourage dietary transitions. Ultimately, we will identify variables that increase the resilience of food systems to global environmental change. This course will train students on how to conduct systematic literature reviews, a key methodology for scientific research and for designing evidence-based policies. As a class, we will conduct a systematic review in the natural and social science literature on the evidence of effects global environmental change, policy, and markets on food systems and socio-economic responses and health outcomes. Interactive lectures, readings from the popular press and primary literature, systematic literature review, peer-led discussions and case studies will provide the opportunity to understand the socio-ecological evidence related to exogenous effects on food systems and factors to enhance resilience towards sustainable communities.
Course Texts


Recommended Reading


6. CALENDAR
- Foundations of Socio-ecological Systems (Weeks 1-2): Provide an overview of the components and processes that characterize coupled natural and human systems. Review core concepts of a systems framework (including resilience, vulnerability and transformation) with which to explore topics throughout the course.

- Evidence on Global Environmental Change (Week 3): Assess evidence of global environmental change in the scientific literature and perspectives related to the causes and consequences.

- Systematic Literature Reviews (Week 3 onwards): Review how to conduct a systematic quantitative literature review.

- Climate Effects on Agro-ecosystems (Weeks 4 – 6): Examine how climate variables such as drought and rainstorms impact crop yields and quality. Conduct a systematic literature review.

- Socio-economic Responses to Global Environmental Change (Week 7 & 8): Evaluate the repercussions of severe weather-impacted agro-ecosystems on livelihoods, diets and community health.
mandatory. Attendance counts as being present for the entire class. If you need to miss a class for an extraordinary personal circumstance that is documented, please inform me as soon as possible. Such documented circumstances include illness, family emergencies, MSU approved university activities, religious holidays, required legal proceedings, mandatory military duties, and obligatory professional obligations. In the event you are expecting to miss class because of planned activities, please notify me prior to your absence.

Participation includes asking and responding to questions, contributing to in-class activities, and sharing knowledge and perceptions in a professional manner in an academic context.

**Punctuality.** Please be seated by the start of class as a courtesy to our classroom learning environment. You are expected to come to class on time and stay for the full class session.

**Respect and Diverse World views.** I encourage students to share their perspectives and world views. In cases, you may disagree with your peers during class discussions. You are encouraged to debate in a scholarly manner and be mindful in remaining respectful and tolerant towards contributing to a healthy, vibrant and respectful class environment.

**Mobile Phones and Music Devices.** As a courtesy to our classroom community, please turn your mobile phones on silent before coming to class and do not use your phones and music devices during class. Texting and emailing is distracting to other students as well as my course facilitation.

**Laptop and Tablet Computers.** You are allowed to use personal computers for taking notes during certain periods of class. There will be periods during class that you are requested to put away your laptop and tablet computers to engage in discussion or for other activities. Thus, please always have a writing tool and paper available for note taking. The use of laptop and tablet computers for other purposes such as email, social networking, internet access and watching movies can be distracting to the learning experience of your peers and to my instruction. Thus, please only use computers for taking notes, unless I request you to search the internet for specific information during class. If your laptop use is for purposes deemed distracting, you will be asked to leave the room.

**Communication.** I encourage you to reach out to me with any questions, concerns and suggestions regarding this course and related academic and career matters during office hours and via email. I expect for all email correspondence to be professionally composed with the course number 'SFBS 491' in the subject line. Key elements of a professionally composed email are: (1) subject line, (2) greeting, (3) brief introduction of the context of your
accommodations or influences will remain confidential. Please also arrange accommodations with Disabled Student Services (DSS) to acquire the appropriate documentation (180 Strand Union Building, http://www.montana.edu/wwwres/disability/index.shtml or call 406.994.2824).

10. SYLLABUS CHANGE CLAUSE
The syllabus may require minor revision during the semester to better serve your learning experience. Any change will be discussed with you.
Dear Keely:

Please accept this statement in support of Selena Ahmed’s proposal for a new course in the Sustainable Food and Bioenergy Systems (SFBS) Program titled: “Food System Resilience, Vulnerability, and Transformation.” This upper-division blended seminar and lecture course is designed to integrate natural and social science aspects regarding food systems with skills in carrying out systematic literature reviews for evidence-based critical analysis for SFBS majors.

Selena was hired as a new faculty member using a brand new line for a fast growing program. Part of her assignment is to create two new courses. One of her new courses was recently approved. This course, "Food System Resilience, Vulnerability, and Transformation," is another of the two new courses. Therefore, no additional financial impact to the Department or to the College is anticipated.

Please don’t hesitate to contact me should additional questions arise. Take care, LR

Lynda Ransdell, Ph.D., FACSM, CSCS
Dean and Professor
College of Education, Health and Human Development
250 Reid Hall
Montana State University
Bozeman, MT 59717
406-994-4133 or Lynda.Ransdell@montana.edu

http://www.montana.edu/wwwed
FOOD SYSTEM RESILIENCE, VULNERABILITY AND TRANSFORMATION
New SFBS Course Proposal (SFBS 466)

Instructor: Selena Ahmed, PhD, Assistant Professor
Email: selena.ahmed@montana.edu
Office location: Romney Gym Room #301B
Office hours: TBD
Mailbox: HHD Advising – 121 Marga Hosaeus Fitness Center

Class meeting time: TBD
Class location: TBD
Class website: https://ecat.montana.edu/ > For all course announcements and materials

Prerequisites: Senior-level standing in the SFBS major including completion of the following courses: NUTR 221C and NUTR 226.

1. COURSE DESCRIPTION
How does global environmental change impact food systems? What models for sustainability and community health can we adapt from indigenous food systems? What ecological and cultural factors enhance resilience of food systems and what factors support transformation to more sustainable systems?

In this seminar and literature-review based course, we will examine these questions within the framework of systems theory. This course will start with an overview of key socio-ecological concepts including resilience, transformation, and vulnerability. We will examine and apply these concepts to a range of case studies in the natural and social sciences. In the natural sciences, we will examine how global environmental change as well as land-use and land-cover change impact food systems. Next, we will turn our attention to the social science literature to understand farmer responses and adaptation to global environmental change and shifts in land use, policies, and markets. We will then assess effects of environmental and cultural change on diets through an exploration of indigenous diets around the world and factors that resist or encourage dietary transitions. Ultimately, we will identify variables that increase the resilience of sustainable food systems as well as factors that support transformation to more sustainable solutions. This course will train students on how to conduct systematic literature reviews, a key methodology for scientific research and for designing evidence-based policies. As a class, we will conduct a systematic review in the natural and social science literature on the evidence supporting a key food system issue. Interactive lectures, readings from the popular press and primary literature, systematic literature review, peer-led discussions, and case studies will provide the opportunity to critically evaluate socio-ecological evidence on exogenous effects on food systems and factors that support sustainability.

2. COURSE LEARNING OUTCOMES
A. Learn key concepts from the socio-ecological systems theory including
resilience, vulnerability, and transformation.
B. Apply key concepts from the socio-ecological systems theory on critically evaluating the effects of environmental, economic, and cultural change on agro-ecosystems, diets, and other key components of food systems.
C. Enhance research skills on how to conduct systematic literature reviews and how to design management plans and policies for sustainable food systems on the basis of evidence.
D. Identify socio-ecological variables that increase the resilience of food systems as well as factors that support transformation to more sustainable systems.

3. COURSE FORMAT
This is a seminar and literature-review based course that relies on active student preparedness, participation, and contribution. Readings in the popular press coupled with the primary scientific literature will develop students’ critical thinking and understanding of climate effects on the food system. Systematic literature reviews will train students how to derive at conclusions on the basis of the scientific literature and will develop capacity to design evidence-based policies.

4. GRADING
Your course grade will be calculated on the basis of the following evaluations and grading scale. These evaluative measures must all be fulfilled in order to receive full course credit.

<table>
<thead>
<tr>
<th>Class Participation</th>
<th>25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Writing Portfolio</td>
<td>30%</td>
</tr>
<tr>
<td>Systematic Literature Review</td>
<td>35%</td>
</tr>
<tr>
<td>Outreach Tool on Factors that Enhance Resilience</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Grading Scale**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>94 - 100</td>
</tr>
<tr>
<td>A-</td>
<td>90 - 93.9</td>
</tr>
<tr>
<td>B+</td>
<td>87 - 89.9</td>
</tr>
<tr>
<td>B</td>
<td>83 - 86.9</td>
</tr>
<tr>
<td>B-</td>
<td>80 - 82.9</td>
</tr>
<tr>
<td>C+</td>
<td>77 - 79.9</td>
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<tr>
<td>C</td>
<td>73 - 76.9</td>
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<tr>
<td>C-</td>
<td>70 - 72.9</td>
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<tr>
<td>D+</td>
<td>67 - 69.9</td>
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<tr>
<td>D</td>
<td>60 - 66.9</td>
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<tr>
<td>F</td>
<td>0 - 59.9</td>
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</tbody>
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5. COURSE READINGS
We will use Ridley (2012) to develop training on conducting systematic literature reviews. In addition, we will use Nabhan (2013) and Miller (2009) as the two main popular culture readings for this course that we will couple with extensive readings in the primary literature. Both students and the instructor will identify readings in the primary literature for weekly readings.

**Course Texts**
Walker, Brian. Resilience Thinking: Sustaining Ecosystems and People in a


Recommended Reading

6. CALENDAR
- **Foundations of Socio-ecological Systems** (Week 1): Provide an overview of the components and processes that characterize coupled natural and human systems. Review core concepts of a systems framework (including resilience, vulnerability and transformation) with which to explore topics throughout the course.

- **Evidence on Global Environmental Change** (Week 2): Assess evidence of global environmental change in the scientific literature and perspectives related to the causes and consequences.

- **Systematic Literature Reviews** (Week 3 onwards): Review how to conduct a systematic quantitative literature review.

- **Climate Effects on Agro-ecosystems** (Weeks 4 – 6): Examine how climate variables such as drought and rainstorms impact crop yields and quality. Conduct a systematic literature review.

- **Socio-economic Responses to Global Environmental Change** (Week 7 & 8): Evaluate the repercussions of severe weather-impacted agro-ecosystems on livelihoods, diets and community health.


- **Indigenous Diets and the Dietary Transition** (Weeks 11 - 13): Look at indigenous diets from around the world, how they are transforming with global change, and lessons for modern diets.

7. STUDENT CONDUCT CODE AND ACADEMIC PRINCIPLES
A commitment to abiding to the principles of Montana State University's Student Conduct Code is mandatory in this course. MSU expects all students to conduct themselves as honest, responsible and law-abiding members of the academic community and to respect the rights of other students, faculty, staff, and the public. Please review MSU's Student Conduct Code at: http://www2.montana.edu/policy/student_conduct/cg600.html. Section 420 of the Student Conduct Code describes academic misconduct as including but not limited to plagiarism, cheating, multiple submissions, or facilitating others' misconduct. The university allows the imposition of sanctions for academic misconduct ranging from an oral reprimand to expulsion from the university.

Plagiarism. Plagiarism includes paraphrasing or quoting work of someone else without giving appropriate credit to the source. You must always cite others work if you draw from any references. Please be aware that your work is subject to screening by a plagiarism software and that any violation of plagiarism policy may be sanctioned according to university policy.

Your work in this course will include both drawing from references that are to be appropriately cited as well as your own thoughts. Assignments that paraphrase only one reference and do not show independent thought will not be accepted. You are encouraged to discuss course content outside of class with your peers and others. This includes discussing homework assignments and final projects. However, you are required to individually work on the specific writing of your homework assignments and the final project.

8. COURSE EXPECTATIONS
In addition to the academic expectations outlined in the MSU Conduct Guidelines, you are expected to meet the following course requirements.

Attendance, Preparedness, and Participation. Because of the interactive nature of this course, your attendance, preparedness and participation are mandatory. Attendance counts as being present for the entire class. If you need to miss a class for an extraordinary personal circumstance that is documented, please inform me as soon as possible. Such documented circumstances include illness, family emergencies, MSU approved university activities, religious holidays, required legal proceedings, mandatory military duties, and obligatory professional obligations. In the event you are expecting to miss class because of planned activities, please notify me prior to your absence.
Participation includes asking and responding to questions, contributing to in-class activities, and sharing knowledge and perceptions in a professional manner in an academic context.

**Punctuality.** Please be seated by the start of class as a courtesy to our classroom learning environment. You are expected to come to class on time and stay for the full class session.

**Respect and Diverse World views.** I encourage students to share their perspectives and world views. In cases, you may disagree with your peers during class discussions. You are encouraged to debate in a scholarly manner and be mindful in remaining respectful and tolerant towards contributing to a healthy, vibrant and respectful class environment.

**Mobile Phones and Music Devices.** As a courtesy to our classroom community, please turn your mobile phones on silent before coming to class and do not use your phones and music devices during class. Texting and emailing is distracting to other students as well as my course facilitation.

**Laptop and Tablet Computers.** You are allowed to use personal computers for taking notes during certain periods of class. There will be periods during class that you are requested to put away your laptop and tablet computers to engage in discussion or for other activities. Thus, please always have a writing tool and paper available for note taking. The use of laptop and tablet computers for other purposes such as email, social networking, internet access and watching movies can be distracting to the learning experience of your peers and to my instruction. Thus, please only use computers for taking notes, unless I request you to search the internet for specific information during class. If your laptop use is for purposes deemed distracting, you will be asked to leave the room.

**Communication.** I encourage you to reach out to me with any questions, concerns and suggestions regarding this course and related academic and career matters during office hours and via email. I expect for all email correspondence to be professionally composed with the course number ‘SFBS’ in the subject line. Key elements of a professionally composed email are: (1) subject line, (2) greeting, (3) brief introduction of the context of your communication, (4) the main questions, concerns, purpose etc. for your communication and, (5) sign off with your name.

It is my goal to provide the best learning experience that I can to meet both my course objectives as well as your needs as learners. I invite you to provide feedback on the course throughout the semester towards providing the most effective learning environment that I can. My office hours for this course are TBD. The best way to reach me outside office hours is via my university email. If you try to reach me via my office phone and I do not pick up, please follow up with an
email. Expect an email response during business hours and within 48 hours of email receipt.

**D2L.** Please regularly check the course D2L site for course announcements, readings, homework assignments and other course material.

**Written Work Policy.** Written homework assignments are to be typed using 12-point font with either Times New Roman, Helvetica, or Arial and one-inch margins. Proper citations, grammar and composition is expected for all assignments. Make sure to include your name and course title on the header of each sheet. You are encouraged to utilize the writing resources at The Writing Center at the Library (http://www.lib.montana.edu/help/writingcenter.php). For grammar and composition assistance, you may tap into the resources at The Writing Center at MSU (http://www1.english.montana.edu/~engweb/wc/).

**Late Assignment Policy.** I do not accept late assignments other than for special circumstances that are documented (i.e. a medical issue accompanied by a medical note).

**Course Drop or Withdraw.** You may drop the course via MYINFO through the 10th day of the semester and must obtain a signature from me to drop the course after this day. You have until September 16th to drop the course and until November 19th to drop a class with a ‘W’ (withdraw) grade. I am willing to sign a drop or withdraw forms for extenuating circumstances; this does not include a poor grade due to a lack of course engagement and poor effort. MSU’s policy on dropping and withdrawing from courses can be found here: http://www.montana.edu/wwwcat/register/register1.html. Information on MSU’s academic calendar can be found here: http://calendar.msu.montana.edu/calendar.php?calId=47.

9. **CHRONIC ILLNESS, DISABILITY OR LEARNING-STYLE NEEDS**
Please come to my office hours preferably within the first week of the course or as soon as possible if you would like accommodation to any chronic illness, disability or learning-style needs, or if you think these may influence your performance in this course. Our discussions on those adjustments, accommodations or influences will remain confidential. Please also arrange accommodations with Disabled Student Services (DSS) to acquire the appropriate documentation (180 Strand Union Building, http://www.montana.edu/wwwres/disability/index.shtml or call 406.994.2824).

10. **SYLLABUS CHANGE CLAUSE**
The syllabus may require minor revision during the semester to better serve your learning experience. Any change will be discussed with you prior to modification.
as soon as possible if you would like accommodation to any chronic illness, disability or learning-style needs, or if you think these may influence your performance in this course. Our discussions on those adjustments, accommodations or influences will remain confidential. Please also arrange accommodations with Disabled Student Services (DSS) to acquire the appropriate documentation (180 Strand Union Building, http://www.montana.edu/wwwres/disability/index.shtml or call 406.994.2824).

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