

1. Overview

A. Provide a brief description of the new certificate.

Food systems are particularly important for human societies to sustain, and are also particularly vulnerable to multiple threats related to the interconnected sustainability challenges we face. Many students from a wide variety of disciplines are interested in food systems. There are courses on the topic in various units, and this certificate offers a way to bring them together and specialize in food systems - for students from any major.

B. This proposed certificate (check one):

- Is cross disciplinary; or
- Is certified by a professional or accredited organization/governmental agency; or,
- Clearly leads to advanced specialization in a field; or,
- Is granted to a program that does not currently have a major.

C. Why should this be a certificate rather than a concentration or a minor?

We aim for students from virtually any major can pursue a specialization in Food System Sustainability

D. Affiliation.

If the certificate program is affiliated with a degree program, include a brief statement of how it will complement the program. If it is not affiliated with a degree program, incorporate a statement as to how it will provide an opportunity for a student to gain knowledge or skills not already available at ASU.

This Certificate pulls together a diversity of existing courses at ASU on food systems and offers a way for students to focus on this topic in addition to their major. It has been our experience in the School of Sustainability that many students are very interested in food systems and sustainability. However, we do not have a track in this topic. We would rather make an interdisciplinary Certificate to make the most of the available course offerings in other units such as Nutrition and Agribusiness, and to offer the Certificate to a more diverse group of students than is represented by SOS majors alone.

The certificate will provide students with an introduction Food System Sustainability in a structured fashion that is not yet organized anywhere at ASU. Although courses about food, nutrition and agriculture are taught in a wide variety of units, students who desire a system-oriented and sustainability-focused course of study have difficulty identifying the suite of appropriate classes. This certificate will bring together courses on food from the social sciences, humanities, life sciences, and applied sciences, providing the opportunity for students to study food in a from a sustainability perspective.

E. Demand

Explain the need for the new certificate (e.g., market demand, interdisciplinary considerations).

Courses on food systems exist in a number of units on campus, and this Certificate would bring them together into a coherent, easy to access structure for students. It has been our experience that this is a significant interest for a number of students, and a growing concern in a variety of economic and policy sectors in which students are likely to seek employment.

F. Projected enrollment

What are enrollment projections for the first three years?

	1st Year	2nd Year (Yr. 1 continuing + new entering)	3rd Year (Yr. 1 & 2 continuing + new entering)
Number of Students (Headcount)	25	50	75

2. Support and Impact

A. Faculty governance

Provide a supporting letter from the chair of the academic unit verifying that the proposed certificate has received faculty approval through appropriate governance procedures in the unit and that the unit has the resources to support the certificate as presented in the proposal, without impacting core program resources.

The establishment of this Certificate has received approval by the interdisciplinary group of faculty listed in this document, as well as by the SOS Faculty. SOS Faculty approved the Certificate at the Oct 9, 2013 Faculty Meeting.

A Faculty committee has been established to govern this certificate, made up of the ASU faculty listed below, from various units:

Christopher Wharton, Nutrition, School of Nutrition and Health Promotion
Hallie Eakin, School of Sustainability
Joni Adamson, English and Environmental Humanities, School of Letters and Science
Mark Manfredo, Morrison School of Agribusiness

B. Other related programs

Identify other related ASU programs and outline how the new certificate will complement these existing ASU programs. (If applicable, statements of support from potentially-affected academic unit administrators need to be included with this proposal submission.)

Because this certificate is interdisciplinary, it complements a wide variety of majors, from Agribusiness to English. We have identified food-related courses in the School of Life Sciences, Department of English, Morrison School of Agribusiness, School of Sustainability, Nutrition and Health Promotion, Engineering, Geography and Urban Planning, School of Transborder Studies, and History. None of these programs offers a comprehensive orientation to sustainable food systems, although each program provides complementary emphases in different aspects of the food system issue (i.e. economics of the food system, culture and social meaning associated with food, sustainability and food, agriculture and agribusiness etc). All of the contacted faculty enthusiastically echoed the need for the certificate and have agreed to support the Committee in making their courses accessible to students pursuing the certificate.

C. Letter(s) of support

Provide a supporting letter from each college/school dean from which individual courses are taken.

(See Attached)

Carlos G. Vélez-Ibáñez, Ph.D. Regents' Professor and Director, School of Transborder Studies, College of Liberal Arts and Sciences

Carol Johnston, PhD, RD, Professor/ Associate Director, Nutrition Program, School of Nutrition and Health Promotion

Mark Lussier, Professor & Chair, Department of English, College of Liberal Arts and Sciences

Keith W. Kintigh, Associate Director and Professor, School of School of Human Evolution and Social Change (SHESC), College of Liberal Arts and Sciences

Chris Martin, Professor and Head, Science and Mathematics Faculty, School of Letters and Sciences

Mark Manfredo, Professor and Director, Associate Dean – W. P. Carey School of Business

3. Academic Curriculum and Requirements

A. Knowledge, competencies, and skills

List the knowledge, competencies, and skills (learning outcomes) students should have when they complete this proposed certificate. Examples of program learning outcomes can be found at (<http://www.asu.edu/oue/assessment.html>).

- * Ability to identify food system drivers, activities, actors, and outcomes at different spatial scales
- * Capacity to critically assess the primary social, economic, and environmental drivers and outcomes associated with food system sustainability challenges
- * Ability to apply one or more of the following analytical skills or approaches to the development of food system sustainability solutions: cultural and social analysis, alternative agricultural design and practice, analysis of biophysical processes and environmental services, urban planning and policy, marketing and entrepreneurial development, sustainability assessment, consumer preference and behavior.

B. Admissions criteria

List the admissions criteria for the proposed certificate. If they are identical to the admission criteria for the existing major and degree program under which this certificate will be established, please note that here.

3.0 GPA

C. Curricular structure

Provide the curricular structure for this certificate. Be specific in listing required courses and specify the total minimum number of hours required for the certificate.

Required certificate courses

Prefix	Number	Title	Is this a new Course?	Credit Hours
SOS	117	Introduction to Food System Sustainability	Yes	3
<i>Section sub-total:</i>				3

Elective certificate courses.

Students choose at least 4 courses from this list – a minimum of two must be selected from Tier 1, and no more than two from the same prefix across both Tiers 1 and 2. However, electives are not limited to courses from this list only. Other courses on food may come up (special topics, etc.) and students may get them approved as an elective for this certificate by the coordinating committee.

	Prefix	Number	Title	Is this a new Course?	Credit Hours
Tier 1 – Core electives	ABS	460	Organic Gardening	No	2
	AGB	456	Food Product Innovation and Development	No	3
	ASB	300	Food and Culture	No	3
	ASB/TCL	463/443	Political Ecology of the Border	No	3
	BIO/SOS	429	Human Impacts on Ecosystem Functioning	No	3
	ENG	367	Environmental Issues in Literature and Film	No	3
	GPH	314	Global Change	No	3
	HON	394	History and Evolution of Human Food	No	3
	NTR	353	The Western Diet: Food, History, and Sustainability	No	3
	PLB	302	Plants and Civilization	No	3
	PUP	498	Pro-Seminar: Urban Food Systems	No	3
	SOS	327	Sustainable Food and Farms	No	3
	Tier 2 – Electives	ABS	368	Plant Propagation	No
ABS		498	Pro-Seminar: Desert Horticulture	No	3
AGB		420	Food Advertising and Promotion	No	3
AGB		452	International Agricultural Policy	No	3
AGB		321	Agribusiness Marketing	No	3
ASB/TCL		464	The Ethnography of Mexico and the Borderlands	No	3
ASB		410	Poverty, Social Justice and Global Health	No	3
ASB/SOC/SOS/SSH		370	Production, People and Environments	No	3
BIO		418	Soil Ecology	No	3
BIO		311	Biology and Society	No	3
BIO		324	Environmental Ethics	No	3
BIO		434	People and Nature: Ecosystem Services	No	3
GLG/SOS)		327/374	Earth’s Critical Zone	No	3
NTR		348	Cultural Aspects of Food	No	3
NTR		448	Community Nutrition	No	3
PHI/HST/SOS/BIO		394	History and Philosophy of Sustainability	No	3
SOS		322	International Development and Sustainability	No	3
TCL		394	Health Policy in a Transborder Context	No	3

Section sub-total: 121

Other certificate requirements

E.g. – Capstone experience, internship, clinical requirements, field studies, foreign language skills as applicable

Credit Hours

Section sub-total:

0

Total minimum credit hours required for certificate

15

D. Minimum residency requirement

How many hours of the certificate must be ASU credit? 15

E. New Courses

Provide a brief course description for each new course.

Food systems are particularly important for human societies to sustain and are also particularly vulnerable to multiple threats related to the interconnected sustainability challenges we face. SOS 117: Food System Sustainability will introduce students to the concepts and issues involved in food systems sustainability. The course will be divided into four modules, the first three of which will address the other systems with which food systems interact - socio-ecological, socio-cultural and socio-technical systems. The final module will address the future of food systems. This course will teach students about the main issues in food system sustainability, and allow students to enhance their critical thinking skills by applying them to the many sustainability challenges associated food system activities via solutions-based learning, including the social, ecological, economic, and institutional dimensions.

Note: All new required courses should be submitted in Curriculum Changemaker and ready for Provost’s Office approval before this certificate is put on Curriculum and Academic Programs Committee (CAPC) agenda.

5. Administration and Resources

B. Administration

How will the proposed certificate be administered (including admissions, student advisement, retention, etc.)?
 The School of Sustainability will administer this certificate.

C. Enrollment projections

What are enrollment projections for the next three years?

	1st Year	2nd Year (Yr. 1 continuing + new entering)	3rd Year (Yr. 1 & 2 continuing + new entering)
Number of Students (Headcount)	25	50	75

D. Resources

What are the resource implications for the proposed certificate, including any projected budget needs? Will new books, library holdings, equipment, laboratory space and/or personnel be required now or in the future? If multiple units/programs will collaborate in offering this certificate please discuss the resource contribution of each participating program. Letters of support must be included from all academic units that will commit resources to this certificate.

No new resources are needed

E. Primary Faculty

List the primary faculty participants regarding this proposed certificate. For interdisciplinary certificates, please include the relevant names of faculty members from across the University.

A Faculty committee has been established to govern this certificate, made up of the ASU faculty listed below, from various units:

- Hallie Eakin, School of Sustainability
- Christopher Wharton, Nutrition, School of Nutrition and Health Promotion
- Mark Manfredo, Morrison School of Agribusiness
- Joni Adamson, English and Environmental Humanities

7. Additional Materials

- B. Complete and attach the Appendix document.
- C. Provide one or more model programs of study (if appropriate).
- D. Attach other information that will be useful to the review committees and the Office of the Provost.

APPENDIX

OPERATIONAL INFORMATION FOR UNDERGRADUATE CERTIFICATES

(This information is used to populate the Degree Search/catalog website.

Please consider the student audience in creating your text.)

A. Proposed Certificate Name: Food System Sustainability

Description (150 words maximum)

Food systems are particularly important for human societies to sustain, however, these systems are particularly vulnerable to multiple threats related to interconnected sustainability challenges. Many students from a wide variety of disciplines are interested in food systems, especially as food and sustainability become increasingly relevant issues to employers in fields across the public and private sectors. This certificate allows ASU students to take advantage of the diversity of courses offered that address challenges to food system sustainability. The certificate encourages students to cover a breadth of topics and perspectives related to food system issues while providing the opportunity to focus on particular skills and approaches suitable for their career paths. Career paths can range from agriculture to marketing and retail, to policy or ethics. This certificate offers an innovative and exciting approach to the challenges of food system sustainability. [Due to the interdisciplinary nature of the certificate, many courses may be found across all four ASU campuses allowing students to choose both the focus area and location of study that best fits their needs.](#)

B. Contact and Support Information

Building Name, code and room number: ([Search ASU map](#)) WGHL 108

Program office telephone number: (*i.e.* 480/965-2100) 480/727-6963

Program Email Address: schoolofsustainability@asu.edu

Program Website Address: <http://schoolofsustainability.asu.edu/undergraduate/undergraduate-degree-programs.php>

C. Program Requirements: Provide applicable information regarding the program such as curricular restrictions or requirements, specific course lists, or academic retention requirements.

There are no prerequisites for the required course, however please plan your certificate course of study carefully as some of the electives have prerequisites.

Required course:

SOS 117 Introduction to Food System Sustainability (3)

Elective certificate courses (12):

Students must choose four electives. A minimum of two courses must be selected from Tier 1 core electives and no more than two courses from the same prefix across both Tiers 1 and 2 should be selected. However, electives are not limited to courses from this list only (see the School of Sustainability website for the most up to date list). Other courses on food may be offered (special topics, etc.) and students may request that these courses are approved as an elective for this certificate by the coordinating committee.

Tier 1 – Core electives (choose two):

ABS 460 Organic Gardening (3)
AGB 456 Food Product Innovation and Development (3)
ASB 300 Food and Culture (3)
ASB/TCL 463/443 Political Ecology of the Border (3)
BIO/SOS 429 Human Impacts on Ecosystem Functioning (3)
ENG 367 Environmental Issues in Literature and Film (3)
GPH 314 Global Change (3)
HON 394 The History and Evolution of Human Food (3)
NTR 353 The Western Diet: Food, History, and Sustainability (3)
PLB 302 Plants and Civilization (3)
PUP 498 Pro-Seminar: Urban Food Systems (3)
SOS 327 Sustainable Food and Farms (3)

Tier 2 – Electives (choose two):

ABS 368 Plant Propagation (3)

ABS 498 Pro-Seminar: Desert Horticulture (3)
AGB 321 Agribusiness Marketing (3)
AGB 420 Food Advertising and Promotion (3)
AGB 452 International Agricultural Policy (3)
ASB/SOS 370 Production, People and Environments (3)
ASB 410 Poverty, Social Justice and Global Health (3)
ASB 464/TCL 464 The Ethnography of Mexico and the Borderlands (3)
BIO 311 Biology and Society (3)
BIO 324 Environmental Ethics (3)
BIO 418 Soil Ecology (3)
BIO 434 People and Nature: Ecosystem Services (3)
GLG 327/SOC 274/SSH/370 327 Earth's Critical Zone (3)
NTR 348 Cultural Aspects of Food (3)
NTR 448 Community Nutrition (3)
PHI/HST/SOS/BIO 394 History and Philosophy of Sustainability (3)
SOS 322 International Development and Sustainability (3)
TCL 394 Health Policy in a Transborder Context (3)

- D. **Additional Admission Requirements** If applicable list any admission requirements (freshman and/or transfer) that are higher than and/or in addition to the university minimum undergraduate admission requirements.)

Admission to this certificate requires a minimum GPA of 3.00.

E. Delivery/Campus Information Delivery:

On-campus only (ground courses and/or iCourses)

Note: Once students elect a campus or On-line option, students will not be able to move back and forth between the on-campus and the ASU Online options. Approval from the Office of the Provost and Philip Regier (Executive Vice Provost and Dean) is required to offer programs through ASU Online.

F. Campus/Locations:

Indicate all locations where this program will be offered.

Downtown Phoenix Polytechnic Tempe West Other:

May 1, 2014

Christopher Boone
Professor and Interim Dean
School of Sustainability
Arizona State University

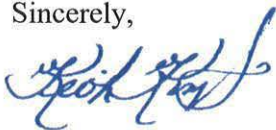
Dear Dean Boone:

On behalf of the School of School of Human Evolution and Social Change (SHESC), I am writing to voice our support for the School of Sustainability undergraduate certificate in Food Systems. We are quite happy to have the following SHESC courses included as electives in the proposed certificate curriculum:

ASB 300 (Food and Culture),
ASB 464 (Ethnography of Mexico and the Borderlands),
ASB 410 (Poverty, Social Justice and Global Health),
ASB 370 (Production, People and Environments)

We are pleased to contribute to this valuable effort. Do not hesitate to contact us should you need any additional input from SHESC.

Sincerely,



Keith W. Kintigh
Associate Director and Professor



May 11, 2014

Dr. Candice Carr Kelman
Assistant Director
School of Sustainability
Arizona State University

Dear Dr. Kelman:

This letter is to confirm our support for your certificate in Sustainable Food Systems. The School of Transborder Studies is very pleased to support your certificate that includes three of our three credit courses: TCL/ASB 464 (Ethnography of Mexico and the Borderlands), TCL/ASB 463 (Political Ecology of the Border); and TCL 394 (Health Policy in a Transborder Context) to be elective courses for your proposed new undergraduate certificate in Sustainable Food Systems.

Sincerely yours,

A handwritten signature in blue ink, which appears to read 'Carlos G. Vélez-Ibáñez'.

Carlos G. Vélez-Ibáñez, Ph.D.
Regents' Professor and Director, School of Transborder Studies
Motorola Presidential Professor of Neighborhood Revitalization
Professor School of Human Evolution and Social Change
Arizona State University
Tempe, Arizona 85287
Carlos.Velez-Ibanez@asu.edu
[School of Transborder Studies](#)
480 965-4908



May 1, 2014

To: Candice Carr Kelman, Assistant Director, School of Sustainability

From: Chris Martin, Professor and Head,
Science and Mathematics Faculty

A handwritten signature in black ink, appearing to read "Chris Martin".

Subject: Certificate in Sustainable Food Systems

The Science and Mathematics faculty in the School of Letters and Sciences is fully supportive of the proposed certificate in Sustainable Food Systems. We are pleased to have the following courses in our Applied Biological Science program included in this initiative and see no negative impacts on our curriculum or program.

ABS368 Plant Propagation

ABS460 Organic Gardening

ABS498 Desert Horticulture

May 14, 2014

Dear Professor Eakin,

I am excited to provide the support of the Morrison School of Agribusiness, W. P. Carey School of Business, to the proposed undergraduate certificate in Sustainable Food Systems. I understand that the certificate will be housed with the School of Sustainability, Julie Ann Wrigley Global Institute of Sustainability. I am also happy to serve on a faculty committee that will govern this certificate.

It is the intention of the Morrison School of Agribusiness to service the AGB 456 (Food Product Innovation and Development) course which will be part of the Tier 1 core. The Morrison School is also happy to service the following courses proposed for the Tier 2 electives: AGB 420 (Food Advertising and Promotion), AGB 452 (International Agricultural Policy) and AGB 321 (Agribusiness Marketing). The mentioned courses have been developed and are regularly offered as part of the Morrison School degree programs. In addition, AGB 456 and AGB 420 are regularly offered as iCourses. I also support the efforts of the multidisciplinary team teaching approach of the proposed SOS 117 (Food System Sustainability) course which will serve as a required core course for the certificate.

Sincerely,



Mark R. Manfredo,
Professor and Director
Morrison School of Agribusiness
Associate Dean – W. P. Carey School of Business at ASU Polytechnic
Arizona State University

Subject: Food systems certificate

Date: Wednesday, April 30, 2014 8:40:21 AM Mountain Standard Time

From: Joan McGregor

To: Candice Carr Kelman

CC: Paul Hirt, Hallie Eakin

Dear Hallie:

Paul Hirt, I and SHPRS support the inclusion of our course History and Philosophy of Sustainability to the new Food System Certificate (PHI/HST/SOS/BIO 394 note we are currently asking for a permanent number for this course and have taught it three time under the 394 number). This certificate will be an important opportunity for students from a variety of disciplines to organize their courses around the topic of food systems.

Best,

Joan

*Joan McGregor
Professor of Philosophy
Director of Undergraduate Studies, Philosophy
Associate Director of Undergraduate Studies, SHPRS
School of Historical, Philosophical, and Religious Studies
Senior Sustainability Scholar, Global Institute for Sustainability
P. O. Box 874302
Arizona State University
Tempe, Arizona
85287-4302
Coor Hall 3352
(480) 965 5028 (office with messages)
(480) 965-5778 (central office)
(480) 965-0310 (FAX)*

Julie Ramsden

From: Hallie Eakin <Hallie.Eakin@asu.edu>
Sent: Monday, May 05, 2014 2:11 PM
To: Candice Carr Kelman
Subject: FW: Food system certificate

From: Mark Lussier <MARK.LUSSIERS@asu.edu>
Date: Monday, May 5, 2014 4:01 AM
To: Joni Adamson <Joni.Adamson@asu.edu>
Cc: Jessica Early <Jessica.Early@asu.edu>, Hallie Eakin <Hallie.Eakin@asu.edu>
Subject: RE: Food system certificate

Dear Joni:

Of course I approve and thank you, Hallie, for including the course.

All the best,

Mark

*Mark Lussier, Professor & Chair
Department of English
Affiliate, Center for the Study of Religion & Conflict
Affiliate, Global Institute of Sustainability
Affiliate, Institute for Humanities Research
Arizona State University
Tempe, AZ 85287-0302
English = (480) 965-3168
www.public.asu.edu/~idmsl
<http://www.palgraveconnect.com/pc/doi/10.1057/9780230119895>*

“The most sublime act is to set another before you.”
William Blake, Proverb of Hell

From: Joni Adamson
Sent: Tuesday, April 29, 2014 5:26 PM
To: Mark Lussier
Subject: FW: Food system certificate

Dear Mark,

Jessica Early directed me to you for a letter of approval for this? Maybe I could write the letter and just bring it for your signature to our Transitions meeting on Thursday?

This will be a good way for us to overlap the EH certificate with another excellent certificate in sustainability. I will be a member of the Committee for this certificate, together with Hallie Eakin (SOS) and Chris Wharton (Nutrition).

Best, Joni

From: Hallie Eakin <Hallie.Eakin@asu.edu>
Date: Monday, April 28, 2014 10:54 PM

To: Joni Adamson <Joni.Adamson@asu.edu>

Subject: Food system certificate

Dear Joni

As you know, we are submitting a proposal to establish a new undergraduate certificate in Sustainable Food Systems. Could you please review the courses that we will be including and help us get a letter of support from your program?

We would like to include the following courses from your area as electives for the new certificate:

ENG 367 Environmental Issues in Literature and Film

We have also appointed you to the Certificate Committee, responsible for administering the certificate together with Mark Manfredo, myself and Chris Wharton.

We would need to submit this proposal by May 20, 2014 so would need your brief letter (email) of support by May 15 to Candice Carr Kelman (copied above).

Let me know if you need any further information.

Thank you!

Hallie

Julie Ramsden

From: Carol Johnston <CAROLJOHNSTON@asu.edu>
Sent: Thursday, May 01, 2014 8:24 PM
To: Hallie Eakin
Cc: Candice Carr Kelman; Christopher Wharton; Linda Vaughan
Subject: Food System Certificate

Hello Hallie,

The Nutrition Program fully supports the creation and implementation of the undergraduate certificate in Sustainable Food Systems. We are pleased to have our courses included and foresee no negative impacts on our curriculum or course offerings. Please let me know if I can be of any further assistance.

Best,

Carol

Carol Johnston, PhD, RD

Professor/ Associate Director
Nutrition Program
School of Nutrition and Health Promotion
Arizona State University
500 North 3rd Street
Phoenix AZ 85004

P: 602-827-2265

F: 602-827-2253

carol.johnston@asu.edu