

MICHIGAN STATE UNIVERSITY

February 12, 2010

MEMORANDUM

TO: Dr. Douglas Estry, Associate Provost for Undergraduate Education
and Dean of Undergraduate Studies

FROM: Dr. Linda O. Stanford, Associate Provost for Academic Services

RE: Request for a New Specialization in Sustainability
For Transmittal to the University Committee on Academic Policy (UCAP)

The request referenced above is being sent to the University Committee on Academic Policy (UCAP) in accordance with the *Bylaws for Academic Governance*, 4.4.

UCAP Response Requested:

Please ask the UCAP to consider the request referenced above and provide consultative commentary. Please mail the related materials referenced under the heading Attachments at the end of this memorandum to the UCAP members.

After receiving UCAP's consultative response, the Provost will make a determination to forward or not to forward the request to the University Committee on Curriculum for its approval of curriculum and degree requirements.

If you have any questions, please call Joy Speas, University Curriculum Administrator, at 5-8420.

Thank you.

Attachments:

1. Request to Establish a New Academic Program form dated January 4, 2010: Specialization in Sustainability and attachments.



UNIVERSITY CURRICULUM and CATALOG

Michigan State University
176 Administration Building
East Lansing, Michigan
48824-1046

PH: 517/355-8420
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COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

1. Request to establish a **Specialization in Sustainability** in the Department of Community, Agriculture, Recreation and Resource Studies. The University Committee on Academic Policy will consider this request.

- a. **Background Information:**

The idea of sustainability has evolved from the pursuit of "sustainable development." The most visible roots of sustainable development emerge from the 1987 Brundtland Report, "Our Common Future" which summarized the outcome of the World Commission on Environment and Development formed in 1983. The commission sought to address growing concern "about the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development." Sustainability addresses wholeness and balance among: a) social equity, b) economic vitality, and c) ecological integrity in order to "meet the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987).

In the two decades since the report has been published the idea of sustainability has evolved, deepened and engaged civil society, the business sector, and government from local to global levels. The emergence of employment websites dedicated to jobs in sustainability mark the rapid growth of career opportunities in this area. Programs of study around sustainability continue to emerge with European universities initiating efforts to transcend disciplinary focus and develop programs and degrees that address this more holistic approach. Throughout the United States, a number of colleges and universities offer programs and degrees in sustainability. The University of Michigan, Colorado State University, Aquinas College, Duke University, Portland State University, University of Massachusetts, University of Minnesota, University of New Mexico, and University of Texas are a few examples. Arizona State University opened the first "school" of sustainability in Fall 2007 providing undergraduate, master's, and doctorate degrees in sustainability. Additionally, MSU holds a membership in the Association for the Advancement of Sustainability in Higher Education (AASHE), an association of colleges and universities working to advance sustainability in higher education in the U.S. and Canada. The Association for the Advancement of Sustainability in Higher Education sponsors the Sustainability Across the Curriculum Leadership Workshop series. The growth in sustainability across campuses led to the development of the Higher Education Associations Sustainability Consortium (HEASC). Interest in sustainability also led to the development of a peer-reviewed publication, the *International Journal of Sustainability in Higher Education*.

MSU is uniquely situated to develop this model of social learning because of its strong interdisciplinary approaches and the existing sustainability programs that connect the University within and beyond the campus. It is recommended that as this new specialization is launched, MSU will utilize existent staff to anchor and build the program, while developing a significant cohort of faculty who can provide necessary support in teaching and guiding the work of students. This specialization offers a unique competency-driven approach rather than relying solely on credits or courses. Therefore students will be required to provide evidence of their proficiency in specified competencies through a learning portfolio built from curricular, co-curricular, and extra-curricular experiences.

- b. **Academic Programs Catalog Text:**

The Specialization in Sustainability enables students to gain holistic and integrated competencies around four broad core content areas: aesthetic appreciation, ecological integrity, social equity, and economic vitality through the domains of civic engagement, systems thinking, critical thinking, and personal development. The specialization provides the opportunity to apply this knowledge and competencies in a wide variety of environments including business, government, and non-governmental organizations which work to cultivate sustainable communities.

The specialization is available as an elective to students who are enrolled in bachelor's degree programs at Michigan State University in the Colleges of Agriculture and Natural Resources; Arts and Letters; Business; Natural Science; and Social Science and James Madison College. With the approval of the department and college that administers the student's degree program, the courses that are used to satisfy the specialization may also

be used to satisfy the requirements for the bachelor's degree. The student's program of study must be approved in advance and in writing by the director of the specialization.

Students must work with the director of the specialization and specialization advisors to prepare a written plan detailing the experiences and courses that will help them complete a portfolio demonstrating competency in the content areas and domains of the specialization. Students begin with enrollment in ACR 187, complete other courses and extra curricular activities and then enroll in ACR 387 to develop an integrative project which plays an essential role in the development of the portfolio. Each semester, students are required to provide evidence in their portfolios of progress toward competencies. Completion and defense of the portfolio is embedded in ACR 487.

Requirements for the Specialization in Sustainability

CREDITS

The student must complete 18 credits from the following:

1. All of the following courses (7 credits):

ACR 187	Introduction to Sustainability	3
ACR 387	Making a Difference in Sustainability	2
ACR 487	Sustainability Portfolio Capstone	2
2. Eleven additional credits of course work selected from a list of approved courses maintained by the director of the specialization. All courses used to fulfill this requirement should be approved by the director of the specialization prior to enrollment.

Upon completion of the requirements for the Specialization in Sustainability, the student should contact the Associate Dean for Undergraduate, Certificate and Faculty and Staff Development of the College of Agriculture and Natural Resources and request certification for the completion of the specialization. After the certification is approved by the Dean of the College of Agriculture and Natural Resources, the Office of the Registrar will enter on the student's academic record the name of the specialization and the date that it was completed. This certification will appear on the student's transcript.

Effective Fall 2010.

DEPARTMENT of COMMUNITY, AGRICULTURE, RECREATION and RESOURCE STUDIES

David E. Wright, Chairperson

The Department of Community, Agriculture, Recreation and Resource Studies is an interdisciplinary department that offers programs leading to the Bachelor of Science, Master of Science, and Doctor of Philosophy degrees. The department's purpose is to educate scholars and practitioners who are trained to address current and future challenges across inter-related issues in natural resources, recreation, agriculture and communities.

The department has a multidisciplinary faculty committed to scholarly programs in four cross-cutting areas that assist the development of sustainable communities: natural resources and the environment; education, communication and leadership; community, food and agriculture; and recreation and tourism. The department's programs provide opportunities for students to obtain a broad, interdisciplinary education, apply theory in practice, and emphasize one or more interdisciplinary professional areas.

The department offers credit and non-credit courses, both on and off campus, for a variety of professionals. Workshops, virtual courses, study abroad programs, and seminars also are conducted to provide professional development opportunities.

UNDERGRADUATE PROGRAMS

Insert ①

SPECIALIZATION IN SUSTAINABILITY

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View a Program		Main Menu
Joy Speas, RO	Wednesday, 2/10/2010	
Program Name: Sustainability Degree: SPCU Sequence Number: 1	Program Request ID: 1569	
Effective Dates: Spring 2010 - Open Status: Interim Initial Action: New		
Requested Date: 10/27/2009 11:59:37 AM		
<p>1. Department/School/College: 02241 Department of Community, Agriculture, Recreation and Resource Studies</p> <p>2. Name of Program: Sustainability</p> <p>3. Name of Degree: SPCU</p> <p>4. Type of Program: Specialization</p> <p>5. Effective Start Semester: Spring 2010</p> <p>6. Target student audience for the program: undergraduate students</p> <p>7. Enrollment: What is the expected enrollment per year: 75 What is the minimum enrollment acceptable: 10</p> <p>8. Source of budget for the program: To align academic planning and curricular change, ALL requests for NEW funds must be included in the College's annual planning letter. Provost approval of new funds and the effective date for the new program must align. If funding is not approved, then the program request will not be forwarded to Academic Council. New Funds If new funds, was this request included in the College's annual planning letter? Indicate yes or no. If no, then this is a department or college fund reallocation (If the program is implemented, no additional resources are required.). Additional recurring resources have been committed from 8 colleges and/or units. A letter from Dean Armstrong detailing the recurring commitments is included in item #15 and is being sent to the Provost.</p> <p>9. Projected Costs as compared to other programs in unit: Higher</p> <p>10. Staff requirement: How many additional staff will be required: 1 Who will provide the primary instruction. Describe any external linkages(industry, government, etc.): Geoff Habron, Fisheries and Wildlife (Agriculture and Natural Resources) and Sociology (Social Science); Laurie Thorp, RISE Program (Natural Science) and CARRS (Agriculture and Natural Resources); and Robert Richardson, CARRS (Agriculture and Natural Resources), also see attached faculty interested in assisting with specialization. A steering committee, a set of core competency teams and external advisory committee to the specialization are being formed. Also, see attached list of other faculty who are interested in working with the specialization.</p> <p>11. Will additional equipment be required: Approximate cost: 0</p>		

Source of funding:

12. Will additional library materials be required:

Approximate cost: 0

Source of funding: There will be no additional library materials required.

13. Will additional space be required:

Type: office

Approximate amount: CANR has already assigned additional space in Giltner Hall.

14. If the program requirements contain a named concentration, do you wish for the concentration to be noted on the student's transcript?:

Yes

15. Detailed Description:

a. Background information including the considerations which precipitated the development of the program, and its relationship to similar programs offered at MSU and by other educational institutions. Supply a copy of standards of accrediting agencies and federal regulations related to the request as appropriate.

The idea of sustainability has evolved from the pursuit of 'sustainable development'. The most visible roots of sustainable development emerge from the 1987 Brundtland Report, "Our Common Future," which summarized the outcome of the World Commission on Environment and Development formed in 1983. The commission sought to address growing concern "about the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development." Sustainability addresses wholeness and balance among a) social equity, b) economic vitality, and c) ecological integrity in order to "meet the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987).

In the two decades since the report the idea of sustainability has evolved, deepened, and engaged civil society, the business sector, and government from local to global levels. The emergence of employment web sites dedicated to jobs in sustainability mark the rapid growth of career opportunities. Programs of study around sustainability continue to emerge with European universities initiating efforts to transcend disciplinary focus and develop programs and degrees that address this more holistic approach of study. Throughout the U.S. a number of colleges and universities offer programs and degrees in sustainability (University of Michigan, Colorado State, Aquinas College, Duke, Portland State University, University of Massachusetts, University of Minnesota, University of New Mexico, University of Texas etc.). In fact, Arizona State opened the first 'school' of sustainability in the fall of 2007 providing undergraduate, masters, and doctorate degrees in sustainability.

MSU holds a membership in the Association for the Advancement of Sustainability in Higher Education (AASHE), a membership-based association of colleges and universities working to advance sustainability in higher education in the US and Canada. AASHE sponsors the Sustainability Across the Curriculum Leadership Workshop series. The growth in sustainability across campuses led to the development of the Higher Education Associations Sustainability Consortium (HEASC). Interest in sustainability also led to development of a peer-reviewed publication, the *International Journal of Sustainability in Higher Education*.

Minors at other Institutions (from Association for the Advancement of Sustainability in Higher Education)

Institution	Name	Credits	Core Courses	Electives
Michigan State University (proposed)	Global Sustainability	18	2 - Introductory course, capstone project course	3-4 (12 credits)
Clarion	<u>Sustainability</u>	19	2 - introductory	4 electives

University of Pennsylvania	<u>Science and Policy</u>		course, and a capstone seminar	
Missouri Southern State University	<u>Sustainability</u>	23	6 - 5 required courses and a capstone course.	
Northland College	<u>Sustainable Systems</u>	26 - 28	3	
University of California, Irvine	<u>Global Sustainability</u>	21	4 - Requires 3 core courses, and a capstone seminar course.	3 electives,
University of Florida	<u>Sustainability Studies</u>	18	1- introductory course	a choice of 5 electives or 4 electives and a capstone course.
University of Minnesota Twin Cities		15	2 -	three electives
University of New Mexico	<u>Sustainability Studies</u>	21	4 - 9 hours of required core courses, 3 hours of a capstone independent study,	9 hours taken from three groups of electives.
University of Southern Maine	<u>Environmental Sustainability</u>	19	3 - including three core courses and	three electives.
University of Massachusetts Dartmouth (proposed)	<u>Sustainability Studies</u>	18	2 - introductory course, and a capstone project.	electives
University of Rhode Island (proposed)	<u>Sustainability</u>	18		

MSU is uniquely situated to develop this model of social learning because of MSU's strong interdisciplinary approaches and the existing sustainability programs that connect the university within and beyond the campus. One of the early questions raised in our deliberations was how this specialization relates to existing specializations at MSU. Might it be possible to simply orient an existing specialization program towards sustainability? As we explored this further, we identified several existing specializations that complement the proposed sustainability specialization: Peace and Justice Studies, Science, Technology, Environment, and Public Policy Specialization (STEPPS), International Development, and (Residential Initiative on the Study of the Environment (RISE). We met with each specialization leader and discussed how we might fuse our idea for a specialization with an existing one. We have also had conversations with the Bailey Scholars Program, and the new Residential College in Arts and Humanities. We discussed the proposed specialization with administrators of the newly formed Sustainable Agriculture and Food Systems Specialization. Directors of all programs concluded that the programs do not overlap and could provide complementary experiences for students who choose to pursue the proposed sustainability specialization in addition to one of the other programs.

b. Rationale for offering the program at MSU.

Requests for such a program have come from MSU students who seek to increase their knowledge and skills in sustainability and to have this knowledge and skills appear as credentials on their transcripts. A team of faculty and students has been working for more than 3 years to conceptualize and develop a program that will provide graduates of the specialization with needed competencies for success. This specialization offers a unique competency-driven approach rather than relying solely on credits or courses. Therefore the specialization requires that students provide evidence of their proficiency in specified competencies through a learning portfolio built from curricular, co-curricular, and extra-curricular experiences.

c. Rationale for the program being housed in the primary administrative unit.

Sustainability transcends all colleges. Therefore, it does not have a distinguishable disciplinary home. Consequently, initial consideration was given to having the specialization administered by the Office of the Associate Provost for Undergraduate Education. The aligning of the sustainability competencies with the "Outcomes of Liberal Learning" that have evolved from the leadership of the Associate Provost's office was considered to be another reason for having the specialization administered through the Office of the Associate Provost for Undergraduate Education. However, the University Committee on Academic Policy decided that an academic unit with faculty must house the program. Through a series of meetings with Associate Deans in Agriculture and Natural Resources (CANR), Broad College of Business, Social Sciences, James Madison, Natural Science and Arts and Letter,; the College of Agriculture and Natural Resources was selected as the College to administer the specialization and the Department of Community, Agriculture, Recreation and Resource Studies was selected as the unit to administer the specialization on behalf of CANR. The other participating colleges and units have agreed to support the program financially in a model similar to the financial model used for the Residential Initiative on the Study of the Environment (RISE) whereby Natural Science serves as the lead unit. The participating colleges and other units include CANR; College of Arts and Letters; College of Natural Science, College of Social Science; Eli Broad College of Business; James Madison College; Department of Community, Agriculture, Recreation, and Resources Studies; Department of Fisheries and Wildlife; and the Department of Sociology.

CANR was selected as the lead college, because sustainability is a core research, extension, and educational thrust area for CANR. CARRS was selected to administer the specialization on behalf of CANR, because CARRS houses a number of units whose work addresses program competencies, including the C. S. Mott Group for Sustainable Food Systems. CARRS also serves as the departmental home of four endowed chairs that contribute to the Sustainable Michigan Endowed Project: C.S. Mott Professor of Sustainable Agriculture, W.K. Kellogg Chair in Agricultural, Food and Community Ethics, Gordon and Norma Guyer and Gary L. Seevers Chair in Natural Resource Conservation, and John A. Hannah Distinguished Professor in Land Policy.

In the years since the creation of CARRS (through the integration of three departments), the faculty have coalesced around a common intellectual base of scholarship in sustainability science, with a distinct focus on the social science and humanities elements embedded in the discipline. The department's research, outreach, and teaching missions are based on the issue-driven approach of sustainability scholarship, which focuses on understanding the complex interactions between human and environmental systems. The faculty includes scholars from the disciplinary dimensions of sustainability (i.e., environmental science, economics, and sociology) as well as numerous other fields of study related to the interdisciplinary nature of sustainability. The department faculty and leadership have identified sustainability scholarship as core to its mission, and the proposed Specialization in Sustainability is a critical component of the department's strategic vision.

d. Educational objectives of the program and their relationship to those of the college and the University.

Sustainability Competencies

The design of the competency model below includes both personal development competencies that are non-discipline specific, as well as sustainability content areas that are more closely aligned with interdisciplinary learning.

A pictorial will be sent as an attachment to visualize organization of the specialization. It would not copy into this program without distortion of the pictorial.

Below is a table indicating the personal development domains and the sustainability content areas of the specialization, specifying how each of these fits with MSU's Liberal Learning Goals that were established by the Office of the Associate Provost and Dean of Undergraduate Students.

	Sustainability Specialization Competency Dimensions	
Personal Development Domain		Meets MSU Liberal Learning Goals:
Self Authorship Competency 1.0 The graduate will describe their personal development.	Learning Objectives Students will: <ul style="list-style-type: none"> • 1.1 Describe one's self and relationship to the larger community • 1.2 Articulate personal worldview to include: ontology, epistemology, axiology, • 1.3 Articulate personal life goals and a plan for achieving these goals • 1.4 Describe personal moral/ethical framework and contrast with at least one theory of human moral development • 1.5 Practice self-reflection • 1.6 Practice self-evaluation • 1.7 Describe the role of the physical self in living and learning 	Integrated Reasoning
Critical Thinking Competency 2.0 The graduate will think critically about sustainability.	Learning Objectives Students will: <ul style="list-style-type: none"> • 2.1 Compare and contrast their personal ethical framework for global sustainability with a differing ethical framework • 2.2 Make decisions based on an ethical framework • 2.3 Identify divergent perspectives for an issue of sustainability • 2.4 Explain the limits and uncertainty in scientific knowledge relating to sustainability • 2.5 Critique various modes/paradigms of inquiry • 2.6 Identify assumptions and biases in knowledge construction 	Analytical Thinking

<p>Civic Engagement</p> <p>Competency 3.0 The graduate is an engaged global citizen.</p>	<p>Learning Objectives Students will:</p> <ul style="list-style-type: none"> • 3.1 Analyze the roles of small group process • 3.2 Practice intentionally small group decision making • 3.3 Provide examples of various roles of engaged and citizens at the local and national level • 3.4 Identify the core democratic principles. • 3.5 Justify how intellectual diversity contributes to civil society • 3.6 Justify how cultural diversity contributes to civil society • 3.7 Justify how social diversity contributes to civil society • 3.8 Practice dialogue and consensus building with a diverse group 	<p>Effective Citizenship and Cultural Understanding</p>
<p>Systems Thinking</p> <p>Competency 4.0 The graduate thinks systemically.</p>	<p>Learning Objectives Students will:</p> <ul style="list-style-type: none"> • 4.1 Define and bound a biological or physical system • 4.2 Define and bound a social system • 4.3 Define and bound a system that has ecological, economic, social and aesthetic elements • 4.4 Identify relationships among structures and processes of a system • 4.5 Identify leverage points in a system • 4.6 Model a balancing loop related to sustainability • 4.7 Model a reinforcing loop related to sustainability 	<p>Analytical Thinking</p>

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Sustainability Content Areas-Breadth Domain		
<p><u>Social Equity</u> Competency 5.0 The graduate will explain how social equity contributes to global sustainability</p>	<p>Objectives Students will:</p> <ul style="list-style-type: none"> • 5.1 Identify key concepts of social development (access to economic resources, food, education, energy, health care, water, sanitation, human rights and other appropriate key concepts) • 5.2 Describe examples of historically significant issues of social justice.. • 5.3 Describe examples of current social justice issues related to sustainability. • 5.4 Explain at least two theories of power • 5.5 Explain the significance of power and its relationship a to sustainability • 5.6 Describe a theory of justice 	Cultural Understanding
<p><u>Economic Vitality</u> Competency 6.0 The graduate will explain how economic vitality contributes to sustainability</p>	<p>Objectives Students will:</p> <ul style="list-style-type: none"> • 6.1 Identify opportunity costs and trade-offs as related to sustainability • 6.2 Identify life-cycle costs, benefits, and externalities 	Analytical Thinking
<p><u>Ecological Integrity</u> Competency 7.0 The graduate employs ecological principles that contribute to sustainability</p>	<p>Objectives Students will:</p> <ul style="list-style-type: none"> • 7.1 Describe the long-term consequences of human activity on ecosystems • 7.2 Explain with scientific data the proposition that the majority of the Earth's ecosystems are degrading • 7.3 Explain using scientific data how we are exceeding the carrying capacity of the planet 	Analytical Thinking
<p><u>Aesthetics</u> Competency 8.0 The graduate employs principles of aesthetics to contribute to sustainability.</p>	<p>Students will:</p> <ul style="list-style-type: none"> • 8.1 Recognize the principles of balance, symmetry, harmony and order • 8.2 Explain what makes for enduring art or beauty • 8.3 Defend a personal appreciation of something beautiful and how it supports global sustainability 	Integrated Reasoning

Sustainability Content Areas-Depth Domain		
<u>Social Equity</u> Competency 5.0	Objectives Students will: <ul style="list-style-type: none"> • 5.7 Identify local, national and international institutions with the mission of improving social equity • 5.8 Explain the social consequences, and responses to natural resource use and distribution. • 5.9 Explain the relationships between technology, environment, and social equity • 5.10 Compare and contrast the quality of life of in developing and industrialized societies 	Cultural Understanding and Effective Citizenship
<u>Economic Viability</u> Competency 6.0	Objectives Students will: <ul style="list-style-type: none"> • 6.3 Describe the application of various economic theories to evaluate resource management and policy options • 6.4 Explain the interaction of private and public goods and externalities in how markets function • 6.5 Propose methods to incorporate principles of sustainability in business practice (profitability, full cost accounting, purchasing, operations, finance, performance measures and other appropriate principles) 	Analytical Thinking, Integrated Reasoning
<u>Ecological Integrity</u> Competency 7.0	Objectives Students will: <ul style="list-style-type: none"> • 7.4 Identify connections of matter and energy between living and non-living systems • 7.5 Describe the transformation of matter and energy between living and non-living systems • 7.6 Compare and contrast the principles articulated in the Rio Declaration, Brundtland Report and Earth Charter 	Analytical Thinking
<u>Aesthetics</u> Competency 8.0	Objectives Students will: <ul style="list-style-type: none"> • 8.4 Critically appraise a work of art • 8.5 Construct a sustainability project integrating aesthetic appreciation as a component. • 8.6 Explain questions and statements artists make about global sustainability with their work 	Integrated Reasoning

e. Faculty who were instrumental in developing the program and faculty who will be responsible for implementing the program (see item 10).

At present the Department of Fisheries and Wildlife and the Department of Sociology support the ½ time Director position held by Geoffrey Habron. RISE and the Department of CARRS will support 0.25 FTE through the participation of Laurie Thorp.

f. Plan for evaluating the program. Plan for assessing student outcomes. For academic major programs, indicate the learning objectives/goals for students and how outcomes will be assessed . Visit <http://www.reg.msu.edu/Read/UCC/assessfrm.doc> to complete the outcomes assessment form and include with the program submission.

MSU Guidelines

Thinking About Assessment. <http://www.reg.msu.edu/Read/UCC/assessinfo.pdf>

Assessing Student Outcomes <http://www.reg.msu.edu/Read/UCC/assessfrm.doc>

Assessment of Student Learning Outcomes

<http://accreditation2006.msu.edu/assessment/Newassessmentpage.htm>

Plan

Implementing program assessment will involve a variety of approaches, strategies, and processes. These include: (a) longitudinal analysis of changes in student, alumnae and faculty abilities, learning, and development as a result of curriculum, (b) analysis of who changes, who benefits and why; (c) studying student, alumna and faculty perspectives on learning and causal attributions to curriculum; (d) studying graduates' career advancement; (e) studying the performance of alumnae abilities in work, personal, and civic roles; (f) validating the competency-based performance assessment process by external review.

Annual Indicators include:

1. Student performance on case study analysis (pre-, post- in ACR 187; in ACR 387)
2. % completion rate
3. Explanation for non-completion
4. Number, kinds and quality of competencies for which proficiency is achieved
5. Number and kinds of evidence used to meet competencies
6. Number and distribution of participating majors (active, graduating)
7. Distribution of project types, locations, impacts and partners
8. Number and unit diversity of participating faculty and staff
9. Frequency distribution of faculty and staff involvement
10. Feedback from program partners (external and internal to MSU)
11. Summary of ACR sustainability program course SIRS forms
12. Grade distribution in ACR sustainability program
13. Student gpa in reference to corresponding major, college and university
14. Student participation in Center for Service Learning and Civic Engagement in reference to corresponding major, college and university
15. Student participation in Study Abroad in reference to corresponding major, college and university
16. Student participation in Undergraduate Research and Arts Forum in reference to corresponding major, college and university

17. Student participation in Professorial Assistant program in reference to corresponding major, college and university

Michigan State University

Assessing Student Outcomes

College: Agriculture and Natural Resources
 Department: Community, Agriculture, Recreation and Resource Studies
 Program or Major: Sustainability
 Program Level: Undergraduate Specialization
 Contact Person: Geoffrey Habron, Laurie Thorp, Robert Richardson

Inventory of Written Statements and Plans

1. Do you have a written mission statement or statement of purpose? **X yes** **no**
If yes, please attach a copy or reference where this can be found:

Sustainability Specialization Mission Statement

The Sustainability Specialization at Michigan State University will improve graduates' capacity to "meet the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987) through achievement of wholeness and balance among the following sustainability competency areas: a) social equity, b) economic vitality, c) ecological integrity d) aesthetic understanding, e) critical thinking, f) systems thinking, g) personal awareness and development (knowledge of self) and h) civic engagement.

2. Do you have a written statement of intended educational outcomes **X yes**
no
 describing what a student should know or be able to do when they have completed this program?

Educational outcomes for the Sustainability Specialization include the following:
 The graduate will demonstrate how social equity contributes to sustainability.

The graduate will demonstrate knowledge to explain how economic vitality contributes to sustainability.

The graduate will demonstrate knowledge of basic ecological principles and the ability to apply these principles to issues of sustainability.

The graduate will demonstrate the ability to value and interpret principles of aesthetics that contribute to sustainability.

The graduate will provide evidence of the ability to think critically about issues of sustainability.

The graduate will demonstrate his/her ability to participate in a democratic society as an engaged citizen.

The graduate will demonstrate the ability to use tools of systems thinking when dealing with issues of sustainability.

3. Do you have a written method of assessment for measuring student **yes**
 no
 outcomes? **See outcomes assessment form below. In addition, rubrics will be used to assess competency levels for each personal domain and each sustainability content area.**
4. Does your program have a separate accreditation process? **yes**
 no
If yes, please list all accrediting agencies below:

Assessment Methodologies

It is likely that some assessment measures are already in place in this program even if they are not identified as being part of a formal assessment plan. Listed below are some of the assessment methodologies you may be using. Indicate "**A**" if the method is currently being used; "**B**" if it is **not** being used but you are interested in using it; and "**C**" if the method of assessment does not apply to your program.

Direct Methods of Assessment

1. C Comprehensive Examinations
2. C Writing proficiency Examinations
3. C National Examinations assessing subject matter knowledge
4. C Graduate Record Exam General Test
5. C Graduate Record Exam Subject Test
6. C Certification Examinations
7. C Licensure Examinations
8. A Locally developed pre-test or post-test for subject matter knowledge
9. A Senior thesis or major project
10. A Portfolio evaluation of student work
11. B Capstone courses
12. B Audio or Video tape evaluations

Indirect Methods of Assessment

1. B Comparison or benchmarking with peer institutions
2. B Job placement of graduates
3. Employer surveys
4. A Advisory groups from your profession
5. B Graduate school acceptance rates
6. A Student graduation/retention rates
7. B Exit interviews with students graduating or leaving the program
8. B Student satisfaction surveys
9. A Student course evaluations
10. B Focus group discussions
11. B Alumni surveys
12. B Alumni honors, awards, achievements
13. A Analysis of grade distributions

- 14. B Peer review of courses
- 15. B Peer review of program
- 16. A Curriculum/syllabus analysis
- 17. A Community service/volunteerism participation
- 18. Other:

Does your program have an experiential learning component? **yes**
 no

If yes, how do you assess the student learning outcomes from that experience?

- 1. A Participate in a class designed to complement the experience
- 2. B Student journals
- 3. B Formal evaluation procedures from field-based supervisor
- 4. B Formal meetings between supervisor, student, and faculty
- 5. B Formal test of practical skills
- 6. Other: ACR 487 practicum course. Portfolio assessment. Portfolio defense.

Implementation Plans

1. How has your department used any of the indicators above to improve services and programs for students?

NA

2. When you think about developing and implementing an assessment plan, what concerns do you have?

No other portfolio and competency-based programs exist at MSU. Few such programs exist at other institutions. Will utilize Graduate Research Assistant, Faculty Learning Communities, Core Competency Teams, Steering Committee and external Advisory Committee to help devise, implement and assess our program.

Return this form to: Kelly Funk
221 Administration Building

Assessing Student Outcomes modified and used with permission, Dr. Sharron L. Ronco, Florida Atlantic University

g. Program description including statement and specific requirements of the program as they will appear in the University catalog. Information contained in the catalog represents a University contract with students. Any deviation from college and University policies must be specifically requested. For a master's degree program, indicate whether Plan A (thesis) or B (non-thesis) or both will be available.

Program Statement for Sustainability Specialization

The specialization in sustainability serves as an elective open to all undergraduate students enrolled in bachelor's degree programs in the College of Agriculture and Natural Resources; College of Arts and Letters; College of Natural Science, College of Social Science; Eli Broad College of Business; and James Madison College. The Department of Community, Agriculture, Recreation and Resource Studies administers the specialization on behalf of the College of Agriculture and Natural Resources.

Sustainability seeks to "meet the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987).

The design of the specialization requires students to:

- 1) gain holistic and integrated competencies around four broad personal development domains – civic engagement, systems thinking, critical thinking, and self authorship.
- 2) develop competencies across the sustainability content areas of aesthetic appreciation, ecological integrity, social equity, and economic vitality.

This specialization provides students an opportunity to apply these competencies and knowledge in a wide variety of environments, including business, government, and non-governmental organizations which work to cultivate sustainable communities. The increasing complexity of modern life brings challenges that require global leaders and citizens who are capable of understanding the relationships among the social, economic and environmental elements and who have skills that can assist institutions and communities to exercise sound judgments around our collective future.

Students in this program must work closely with a team of faculty and staff members to design projects and select course work that help them attain competency across the personal development domains and across the sustainability content areas. Students must demonstrate competencies in these areas of the specialization as evidenced by a portfolio of their work and a final project that integrates various components of the specialization. Students may achieve some of their competencies through non-credit experiences that become part of their learning portfolio.

Requirements for the Specialization in Sustainability

Students must:

1. Complete all of the following courses:

ACR 187	Sustainability and you 3
ACR 387	Making a Difference in Sustainability 2
ACR 487	Sustainability Portfolio 2
2. Work with the Director and sustainability specialization advisers to prepare a written plan detailing the experiences and courses that will help them complete a portfolio demonstrating competency in the personal development domains and the sustainability content areas of the specialization. Each semester, students must provide evidence of progress toward competencies in their portfolios.
3. Complete eleven (11) additional pre-approved credits selected across the sustainability content areas of aesthetic appreciation, ecological integrity, social equity, and economic vitality. The program director will maintain a list of eligible courses.

Upon completion of the requirements for the Specialization in Sustainability, the student should contact the Chairperson of the Department of Community, Agriculture, Recreation and Resource Studies and request certification for the completion of the specialization. After the certification is approved by the Dean of the College of Agriculture and Natural Resources, the Office of the Registrar will enter on the student's academic record the name of the specialization and the date that it was completed. This certification will appear on the

student's transcript.

h. If the program will be offered in a location other than the main campus in East Lansing, specify the location (s).

i. List the name and describe any certificate program that is associated with a new or extant degree program.

- Explain the relationship between the certificate program and a new or extant degree program.

- If a certificate program is being proposed that is related to a degree program, please explain how the department/school/college will learn that the supervising faculty have endorsed the potential certificate holders as possessing specified skills or competency levels that render them eligible to receive the certificate and the degree.

j. Other information that will assist the Provost and the University-level committees in evaluating the request.

Administrative Structure and Function

Sustainability Specialization Steering Committee

The guidance for the development and oversight of the curriculum and the pedagogy for the sustainability specialization will be through the Steering Committee (SC). The SC will be made up of faculty representing a minimum of five colleges and include staff or administrators from other units such as University Outreach and Engagement, Student Life, Residence Life, etc. The SC will consist of 10 faculty members, with no more than two from any one college and two additional non-voting members. Terms will be for two years, except for half of the SC, which will serve an initial three-year term. Members will be appointed with the approval of the corresponding associate dean responsible for undergraduate education of each participating college. A chair of the SC will be selected by a majority of members and serve for a one-year term. The chair is eligible for re-election in successive years.

The SC will be responsible for approving the curriculum and design of the core courses of the specialization and will review the progress of the program annually. The director of the program will meet with the SC each semester to update members and to receive input and address any issues arising from the program.

Sustainability Specialization Advisory Committee

The Advisory Committee for the Sustainability Specialization will be composed of a maximum of 15 members appointed to represent alumni, government, business, and civil society. Members will meet annually to advise the program on emerging interests, trends, opportunities, and to help insure the program graduates are emerging with the best opportunity to find meaningful and productive employment in sustainability fields.

Core Competency Teams

Each of the core competency areas will include a team of faculty responsible for development, refinement and stewardship of the competency area. The team will include no fewer than 3 competency resource people. The team will provide guidance on the number, kind and level of proficiency for the competency areas. The team will also serve to provide guidance for assessment rubrics for the portfolio review process.

Professional Development

Since 2008, the Office of Faculty and Organizational Developing (FOD) has supported a Faculty Learning Community on Sustainability Across the Curriculum. The following individuals have made commitments to work with the Sustainability Specialization.

SUSTAINABILITY SPECIALIZATION COMMITMENTS 9/05/07

The following individuals have made commitments to work with the Sustainability Specialization.

me	College/ Unit	Lecture	Design	Projects	Portfolio	Advising	Research	Steering
Bird	ANR	x	x	x	x	x		x
Detjen	CAS	x		x	x			
Casey	CSLCE		x	x	x	x		
Bruch	ANR/SSC	x	x	x	x	x	x	x
Gage	ANR							
rayan	ENG	x		x				
LaMore	Community Economic Development	x	x	x	x	x	x	x
Selke	ANR							
fferman	ENG							
mmer	CAS	x	x	x	x	x	x	x
Harman	SSC	x			x			
Harris	SSC	x		x				
Julier	AL			x				x
ulson	CAS	x			x	x		
Geith	MSU Global		x					x
chhoff	ESPP	x	x	x	x	x	x	x
Rowe	ANR	x						
terson	AL	x						x
rteniuk	VM	x						
gnetti	AL	x	x	x		x		

Below is a small sample of courses that align with the Core Competency Domains of the Specialization and which students may take. An up-to-date, dynamic course list will be kept by the Director. No set of courses will appear in the Academic Programs Catalog.

Social Equity

Elective courses with no (or minimal) pre-requisites	Elective courses with pre-requisites
ACR 250 Global Issues in Agriculture and Natural Resources ANP 201 Sociocultural Diversity ESA 211 Introduction to Gender and Environmental Issues FW 211 Gender and Environmental Issues GEO 151 Cultural Geography ISS 215 Social Differentiation and Inequality ISS 225 Power, Authority, and Exchange ISS 310 People and Environment or env-society equivalent - SOC/ANTH/GEO ISS 315 Global Diversity and Interdependence/ PHL 200 Introduction to Philosophy SOC 215 Race and Ethnicity SOC 330 Social Stratification SOC 368 Science, Technology and Society SOC 452 Environment and Society	ANP 321 Anthropology of Social Movements ANP 330 Race, Ethnicity and Nation ANP 430 Culture, Resources, Power ANP 431 Gender, Environment and Development ANP 436 Globalization and Justice PHL 353 Peace and Justice Studies

Ecological Integrity

Elective courses with no (or minimal) pre-requisites	Elective courses with pre-requisites
BS 110 Organisms and Populations ENT 205 Pest, Society and Environment ESA 124 Introduction to Sustainable Agriculture and Food Systems ESA 200 Introduction to Environmental Studies and Agriscience ESA 201 Environmental and Natural Resources FOR 220 Forests and the Global Environment FW 203 Resource Ecology GLG 201 The Dynamic Earth GEO 206 Physical Geography ISB 201 Insects, Globalization, and Sustainability* ISP 203A Understanding Earth: Global Change ISP 203B Understanding Earth: Natural Hazards and the Environment ISP 217 Water and the Environment ISP 221 Earth Environment and Energy* LBS 144 Biology I: Organismal Biology	ESA 320 Environmental Planning and Management ESA 324 Water Resource Management FOR 404 Forest and Agricultural Ecology FW 364 Ecological Problem Solving FW 444 Conservation Biology ZOL 355 Ecology

Aesthetic appreciation

Elective courses with no (or minimal) pre-requisites	Elective courses with pre-requisites
IAH 206 Self, Society, and Technology IAH 231A Themes and Issues: Human Values and the Arts and Humanities IAH 231B Themes and Issues: Moral Issues and the Arts and Humanities IAH 241E Creative Arts and Humanities: The Creative Process WRA 110 Writing: Science and Technology WRA 341 Writing Nature and the Nature of Writing	PHL 345 Aesthetics

Economic Vitality

Elective courses with no (or minimal) pre-requisites	Elective courses with pre-requisites
EC 201 Introduction to Microeconomics EC 202 Introduction to Macroeconomics	EC 310 Economics of Developing Countries EEP 255 Ecological Economics EEP 320 Environmental Economics EEP 405 Corporate Environmental Management FOR 464 Natural Resource Economics and Social Science MC 241 Politics and Markets MC 361 Political Economy and Comparative Public Policymaking: Environmental Policy in the Eastern Mediterranean Basin ESA 460 Natural Resource Economics

Letter from Dean Jeffrey D. Armstrong to Provost Wilcox explaining the funding commitments for the specialization.

December 22, 2009

MEMORANDUM

To: Kim Wilcox, Provost

From: Jeffrey D. Armstrong, Dean

RE: Funding for the Proposed Sustainability Specialization

I am writing to provide evidence of the recurring financial support that is needed to offer the proposed Specialization in Sustainability that is being submitted to the University Curriculum Committee for consideration in Spring 2010. The recurring budgetary needs for the specialization is \$75,000. The Specialization is a joint effort among nine colleges and departments: Eli Broad College of Business; College of Natural Science; College of Social Science; College of Arts and Letters; James Madison College; College of Agriculture and Natural Resources; Department of Sociology; Department of Fisheries and Wildlife; and the Department of Community, Agriculture, Recreation, and Resource Studies.

Each of the partnering colleges and departments values the scholarship, teaching, and outreach components of sustainability and recognize the importance of engaging our students around the concept of sustainability.

The total recurring commitments, financial or in-kind contribution of faculty time, totals \$95,628, thereby surpassing the estimated budget for the program as listed below. It should be noted that the bulk of the contributions is composed of in-kind faculty time needed to operate the specialization.

Annual Cash Contributions	Commitment	Commitment by
College of Agriculture and Natural Resources	\$13,000	Jeff Armstrong
Eli Broad College of Business	\$ 9,000	Elvin Lashbrooke, Jr.
College of Social Science	\$ 8,000	Marietta Baba
College of Arts and Letters	\$ 3,000	Karin Wurst
James Madison college	\$ 1,000	Sherman Garnett
Center for European, Russian, & Eurasian Studies	\$1,000	Norman Graham
<i>Subtotal</i>	<i>\$35,000</i>	

Annual In-Kind Contributions	Commitment	Commitment by
50% of Dr. Geoffrey Habron's time Depts. of Fisheries & Wildlife and Sociology	\$39,400	Janet Bokemeier & Mike Jones
10% of Laurie Thorp's time Contributed by CNS	\$ 6,228	Jim Kirkpatrick & Kathy Doig
25% of Laurie Thorp's time contributed by CARRS	\$15,000	David Wright
<i>Subtotal</i>	<i>\$60,628</i>	
TOTAL	\$95,628	

Budget

Focus on infusing sustainability competencies across all approved courses offered in specialization and portfolio documentation of learning. Professional development to this end will be provided for faculty teaching courses associated with specialization.

clerical technical	1/2 FTE	20K
faculty time: teaching, program admin, advising, competency assessment, student engagement and research oversight, faculty development	1/2 FTE	40K
I.T./ webmaster (student)		5K
marketing		5K
supplies		5K
	Total	\$75K

As noted above, the recurring funding for the program meets the financial needs of the program. Thus, I am requesting that UCC be permitted to review the proposed Sustainability Specialization during Spring 2010. Please let me know if additional information is needed.

Thank you for considering this request.

Cc: Dr. Linda O. Stanford
 Dr. Doug Estry
 Dean Marietta Baba
 Dean Sherman Garnett
 Dean R. James Kirkpatrick

Dean Elvin C. Lashbrooke, Jr
 Dean Karin A. Wurst
 Dr. G. Geoffrey Booth
 Dr. Kathy Doig
 Dr. Eunice F. Foster
 Dr. Norman A. Graham
 Dr. Thomas Summerhill
 Dr. Janet A. Swenson
 Dr. Janet L. Bokemeier
 Dr. Michael L. Jones
 Dr. David Wright
 Dr. Geoffrey B. Habron
 Dr. Laurie G. Thorp
 Dr. Robert B. Richardson
 Dr. Matt R. Raven
 Dr. Frank Fear
 Dr. Richard Brandenburg
 Dr. Brenda Alston-Mills
 Kris Hynes

16. Are there admissions requirements for this program?:

Grade or grade-point average requirements and if so in which course(s), portfolio requirement, audition, essay, etc. If there are not admission requirements other than those required by the University policy indicate "none".

None

DEPARTMENT LEVEL APPROVAL STATUS

Approved: Department of Community, Agriculture, Recreation and Resource Studies
 12/31/2009 7:59:53 AM by Eunice Foster for David Wright, Acting Chairperson

Comments: Approved by Eunice Foster on behalf of CARRS with the consent of CARRS (Matt Raven)

SIGNOFFS STATUS

Signed Off: College of Arts and Letters
 1/3/2010 12:33:44 PM by Janet Swenson for Janet Swenson, Associate Dean

Signed Off: College of Natural Science
 1/4/2010 11:05:35 AM by Kathryn Doig for Kathryn M. Doig, Associate Dean

Signed Off: College of Social Science
 1/3/2010 2:52:43 PM by Thomas Summerhill for Thomas Summerhill, Acting Associate Dean

Signed Off: Eli Broad College of Business and The Eli Broad Graduate School of Management
 1/4/2010 2:57:13 PM by Michelle McNure for Geoffrey Booth, Acting Associate Dean

Signed Off: James Madison College
 12/31/2009 8:32:59 AM by Norman Graham for Norman Graham, Acting Dean

Signed Off: Department of Fisheries and Wildlife
1/4/2010 8:39:54 AM by Kelly Millenbah for Michael Jones, Acting Chairperson

Signed Off: Department of Sociology
12/31/2009 9:24:00 AM by Tobias TenEyck for Janet Bokemeier, Chairperson

COLLEGE LEVEL APPROVAL STATUS

Approved: College of Agriculture and Natural Resources
1/4/2010 4:49:34 PM by Eunice Foster for Eunice F. Foster, Associate Dean