


## ONE-PAGE GRADUATE CERTIFICATE IN SUSTAINABILITY SUMMARY

**REQUIREMENTS: Must have 3.0 GPA to be accepted in the Program; Must be admitted to NMSU Graduate Collage; Must complete 12 credit hours with 3.0 or above grade in each course.**

### REQUIRED COURSES AND THEIR SEQUENCE:

**FIRST CLASS:**  **BA 550 Special Topics (3 credit hours) - Interdisciplinary seminar in Sustainability Development** – no prerequisites.


Course Description: Examines the principles of environmental assessment and management. Topics include global environmental concerns, industrial environmental management, life cycle assessment, system analysis, process improvement, and sustainable development, among others.

**SECOND CLASS:**  **ANTH 536 Anthropology of Development (3 credit hours)** – no prerequisites

Course Description: The study of global processes of social and economic change, and their impact on non-Western societies.

**THIRD CLASS:**  **ANTH 538 Plants, Culture, and Sustainable Development (3 credit hours)** – no prerequisites

Course Description: Study of role of indigenous cultures and indigenous knowledge systems in plant domestication, ethnoecology, and preservation of traditional crop diversity. Examination of issues related to conserving cultural diversity, food systems, food security and biodiversity.

**FINAL CLASS:**  **MGT 548 Small Business Consulting (3 credit hours)** – prerequisite senior standing or consent of instructor; For Graduate Certificate in Sustainability, must Complete BA 550; ANTH 536, ANTH 538

Course Description: Study, analysis, and presentation of recommendations for solving significant problems confronting small businesses or other type of organization (public, non-profit, etc.) Note: Includes a final project, with at least ten hours spent with an organization doing environmental-sustainability consulting.

Summary: The *Sustainability Graduate Certificate* provides students with an initial Management Department course (BA 550 Seminar in Sustainability Development in the Green Economy), followed by two courses from the Anthropology Department (ANTH 536 Anthropology of Development; ANTH 536 Plants Culture and Sustainable Development; and concluding with a second Management Department course (MGT 548 Small Business Consulting) in which the graduate students conduct and environmental audit during in a consulting project to a small business, or a public, or a non-profit organization. The project includes at least two interventions that improve the sustainability of the organization (such as energy savings, reduction of use of natural resources, development of more sustainable relation to the ecosystem, and so forth).

**PROPOSED 'Sustainability Graduate Certificate Program'** at New Mexico State University draft date Aug 20 2014

1) **Title:** *Sustainability Graduate Certificate Program*; Start Date Fall, 2014

2) **The purpose of program:** The primary purpose of the *Sustainability Graduate Certificate Program* is to provide post-baccalaureate students pursuing a career in sustainability specific skill training to enhance employability to quickly meet manpower needs within the state of New Mexico, the region, and the United States. Sustainability is a multidisciplinary field and, therefore, students with educational backgrounds in disciplines across more than one department are usually well suited to pursue a green career and are encouraged to consider this certificate program. This certificate program will also enhance the interdisciplinary expertise in sustainability, transform careers through mastery of latest green topics and trends. Therefore the *Sustainability Graduate Certificate Program* is designed to serve two groups of individuals:

- Current graduate students from a variety of NMSU programs who wish to expand their primary area of study to include a focus in sustainability across more than one College; and
- Non-degree seeking students (such as professionals in sustainability-related careers) who have completed an undergraduate degree and wish to refresh update and extend their knowledge and skill set in sustainability.

**Program demand:** Demand: Feedback from MBA students at the August 20<sup>th</sup> MBA orientation, and meetings with Dean, Associate Dean, and Department Heads of College of Business (August 20<sup>th</sup>) indicate there is demand for this program. For example, accounting majors are finding that they are being ask to not only write annual financial reports, but participate in writing Sustainability Reports. [See online examples](#). Interviews conducted by MGT 661 (Qualitative Methods Seminar) students found that over 80% of the exhibitors sampled, were interested in students who had Sustainability training. An interview conducted with El Paso Electric 'Sustainability Officer' indicated strong interest in training in how to achieve sustainability in their own organization.

Consider just one area of need: Healthcare and Sustainability Training. For example, Rich, Carrie, and Seema Wadhwa (2013). "STRATEGIES FOR TRANSFORMING HEALTHCARE CURRICULA." *Higher Education for Sustainability: Cases, Challenges, and Opportunities from Across the Curriculum*. They report that demand for 'Sustainability training' is increasing. Demand for sustainability in higher education has "continued to grow" (p 18). The future outlook "Demand for sustainability training in healthcare administration education will result from the need to comply with complex environmental laws and regulations at the Environmental Protection Agency (EPA) and the Joint Commission (JCO continue to develop and hold healthcare deliver systems accountable to environmental sustainability regulations" (p. 105). This suggests a strong market for Healthcare administrators seeking to understand environmental practices. We intend to market to the Association of

University Programs in Health Administration (AUPHA) and the American College of Healthcare Executives (ACHE) and the “National Capital Region sustainable Healthcare Alliance (NCRSHA).

We seek to develop the sustainability curriculum by create mechanisms for faculty and students to collaborate between and among disciplines in ways that foster the teaching and learning of sustainability. We are infusing sustainability into the existing curriculum, and recognizing places where it is already a part of courses within particular disciplines. This means developing synergistic multidisciplinary collaboration between the cultural sciences, life sciences, and professional schools. In this way faculty and students are part of a learning community that can craft answers to society’s most pressing sustainability challenges.

The Sustainability Graduate Certificate addresses the paradigm shift that is underway in society, and in the global economy. The twentieth century resource intensive extractive modes of production and wealth creation are unsustainable in the long term. Across the globe — famines, armed conflicts, population increase, depletion of natural resources, and so on — result in demand for interdisciplinary problem-solvers, people who can develop sustainability metrics, understand ecosystems, be able to engage in real-world change projects. There is a strong workforce demand for professionally trained graduate students who are educated in sustainability.

**Program overview:** The *Sustainability Graduate Certificate Program* offers an integrated series of courses that comprise a multidisciplinary study of the environmental, social, cultural, and economic dimensions of sustainability. The *Sustainability Graduate Certificate* will be awarded to students admitted students who complete the 12 credit hours of coursework required by the program with a minimum Grade of 3.0 in each class.

In sum, the *Sustainability Graduate Certificate* provides students with an initial Management Department course (BA 550 Seminar in Sustainability Development in the Green Economy), followed by two courses from the Anthropology Department (ANTH 536 Anthropology of Development; ANTH 536 Plants Culture and Sustainable Development; and concluding with a second Management Department course (MGT 548 Small Business Consulting) in which the graduate students conduct and environmental audit during in a consulting project to a small business, or a public, or a non-profit organization. The project includes at least two interventions that improve the sustainability of the organization (such as energy savings, reduction of use of natural resources, development of more sustainable relation to the ecosystem, and so forth).

The purpose of the four-course sequence is to provide graduate students with the background and skills necessary to address problems related to energy, the environment, culture and society, and economic development as interdependent and interconnected processes and contexts.

### **Sustainability Definitions:**

While there is not one definition, many agree that Sustainable Development meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainability in the NMSU curriculum encourages students to make connections between the knowledge and skills addressed in traditional, discipline-based course offerings with their applications by practitioners, policy makers, and consumers to help create a sustainably configured economy, society, and environment.



***Sustainability-focused courses*** concentrate on the concept of sustainability, including its socio-cultural, economic, and environmental dimensions, or examine an issue or topic using sustainability as a lens. To be considered sustainability-focused, the course should include three or more of the sustainability educational objectives listed below, and put the leaf above in your course materials.

We have worked this past two years to identify sustainability courses across the university.

### **Sustainably-focused and Sustainability-related classes typically include one or more of the following topics:**

1. Technical: learning processes for sustainable actions (e.g., analytical tools, practical training, experimentation with energy systems and materials).
2. Cultural and Human Ecology: learning about cultures around the world and connecting globally to benefit societies around the world (e.g., ethics; family systems and community organizations and their relationship to food production, water issues, and sustainable use of renewable and nonrenewable cultural and natural resources).
3. Management: learning management skills related to sustainability (e.g., leadership skills, innovative technology and systems thinking)
4. Integration of multiple skills: using interdisciplinary skills learned from various departments across the college (e.g., integrating natural and social sciences, analytical methods, and critical reasoning skills to evaluate renewable and nonrenewable resource issues)
5. Economics and Sustainable Development: all layers of sustainability must include the economics of keeping environmental systems alive (e.g., theoretical environmental, ecological, and natural resource economics that teaches students cost-benefit and financial analysis including environmental impacts and issues in the analysis).
6. Biological and Environmental Systems (e.g., development of models that explain maintenance and loss of biodiversity and using that knowledge for sustainable management and conservation).



**Sustainability-related courses** incorporate sustainability as a distinct course component or module, or concentrate on a single sustainability principle or issue. To be considered sustainability-related, a course should include one or more of the sustainability educational objectives listed below, and please put the leaf in your department and course materials. Thank you.

**3) Evidence of need:** The *Sustainability Graduate Certificate Program* meets the need for a multidisciplinary perspectives and a focus on understanding green practices across Colleges and disciplines. This certificate program addresses the needs of both enrolled and non-degree seeking students that meet regular admissions criteria of NMSU. Sustainability is already interdisciplinary. No single department or College has a universally accepted approach to sustainability.

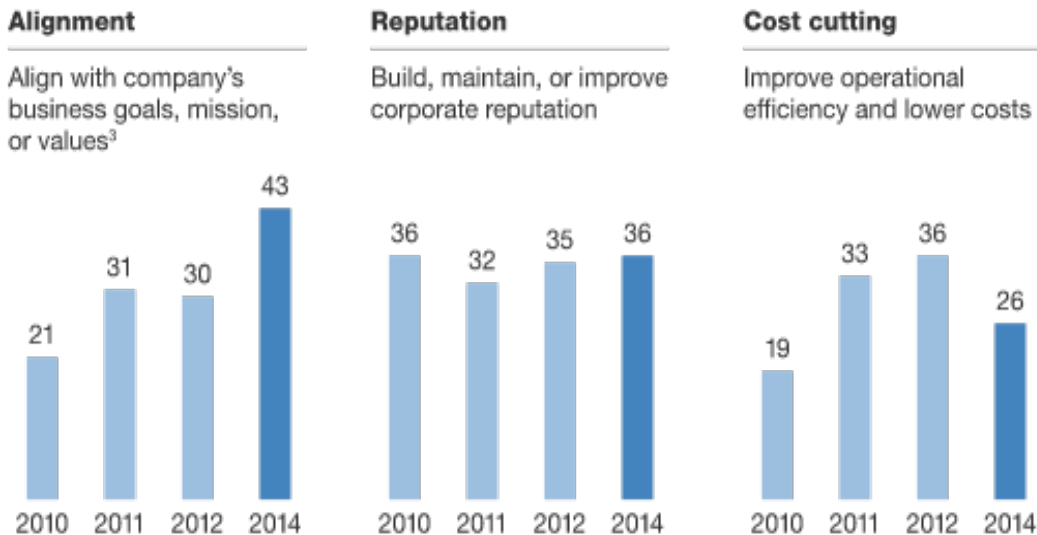
- There is a recent trend to integrate sustainability in courses across many universities. Such initiatives are known as ‘greening the curriculum.’ New Mexico State University has 60 years of sustainability research and pedagogy initiatives, and currently has a Gold Star rating for its curriculum and operations. [Read More](#).
- The environment has been shown in surveys to be related to public health. See Saelens, Brian E., et al. (2003) "Neighborhood-based differences in physical activity: an environment scale evaluation." *American journal of public health*, 93.9: 1552-1558. [Read More](#).
- **How is sustainability related to Health?** “Healthy Habits: Timing for Developing Sustainable Healthy Behaviors in Children and Adolescents” according to National Institutes of Health (NIH) involves “innovative research to identify mechanisms of influence and/or promote positive sustainable health behavior(s) in children and youth (birth to age 18). Positive health behaviors may include: developing healthy sleep patterns, developing effective self-regulation strategies, adaptive decision-making in risk situations, practicing proper dental hygiene, eating a balanced and nutritious diet, engaging in age-appropriate physical activity and/or participating in healthy relationships” [Read More](#).
- For example, related to Education, a survey by John Stir (2006) of students reports results “to a multiple-choice question about the degree to which [Education for Sustainable Development] ESD should be a component of their teacher preparation, a large majority (86%) believes that aspects of sustainability should be infused throughout their preparation as teachers. 3.4” [See More](#).
- NMSU is a signatory to two sustainability agreements: the Talloires Agreement and the College and University President's Climate Commitment (ACUPCC)
- “The concept of cleaner production and sustainability came into focus after the issue of the Brundtland Report (Brundtland 1987)” ([Chow, 2007: 887](#)). See Brundtland, G. H. (1987). “Our Common Future.” Oxford University Press,

UK. [View entire report.](#)

- In terms of Business and Economics, according to McKinsey & Company (2012) survey: "According to executives, sustainability is becoming a more strategic and integral part of their businesses. In past surveys, when asked about their companies' reasons for pursuing sustainability, respondents most often cited cost cutting or reputation management. Now 43 percent (and the largest share) say their companies seek to align sustainability with their overall business goals, mission, or values<sup>2</sup> —up from 30 percent who said so in 2012." [For More.](#) Three Reasons are given by executives in this employer survey as shown below:

% of respondents<sup>1</sup>

**Top 3 reasons that respondents' organizations address sustainability<sup>2</sup>**



<sup>1</sup>In 2010, n = 1,749; in 2011, n = 2,956; in 2012, n = 3,847; and in 2014, n = 2,904. The survey was not run in 2013.

<sup>2</sup>Out of 12 reasons that were presented as answer choices in the question.

<sup>3</sup>From 2010 to 2012, the answer choice was "Align with company's business goals."

*Why is the certificate needed?* It is needed to develop the student's interdisciplinary appreciation, understanding, and skills in sustainability. It is designed for both degree seeking and non-degree students.

**Educational objectives and outcomes:**

- a. Formulate, implement, evaluate and control the various functions of the organization from a sustainability systems perspective.
- b. Understand the external environment and its impact on the organization sustainability, and the impact of the organization on the ecological environment.
- c. Extend or refresh and update knowledge and skill set in sustainability.
- d. The courses may provide basic continuing education, or may be used to prepare for career advances, including taking professional certification exams.
- e. Understand and be able to effectively communicate the varied concepts of sustainability.
- f. Develop and use an ethical perspective in which they explain how sustainability relates to their lives and values, and how their actions impact issues of sustainability.
- g. Become aware of and explain how economy, society, culture, energy, and the environment are interrelated, making connections between their chosen course of study and sustainability.
- h. Develop technical skills or expertise necessary to implement sustainable solutions.
- i. Explain the ways in which sustainable thinking and decision-making contributes to the process of creating solutions for current and emerging social, environmental, and economic crises.
- j. Apply concepts of sustainability locally (e.g. to change daily habits and consumption patterns) and globally by engaging in the challenges and solutions of sustainability in a world context.
- k. Synthesize understanding of the interconnections among social, cultural, economic, energy, and environmental systems and reason holistically.

*Who will the certificate program serve?* The wide variety of course options that satisfy the certificate requirements allows both current graduate students and non-degree seeking students to tailor their program of study to fit their specific needs or areas of interest.

Will the certificate help meet employment needs within the state, region and/or the

United States? Yes.

Evidence of need can include employer surveys *and* student surveys, and projections of labor force needs. Other types of unmet needs as identified by faculty can also be included in the proposal.

4) Description of prospective students who will benefit from the certificate.

- Current graduate students from a variety of NMSU programs who wish to expand their primary area of study to include a focus in sustainability across more than one College; and
- Non-degree seeking students (such as professionals in sustainability-related careers) who have completed an undergraduate degree and wish to refresh update and extend their knowledge and skill set in sustainability.
- Both groups of students can achieve careers in sustainability. There are 12 key career sectors of sustainability in New Mexico, the nation, and in other countries:
  - Agriculture and forestry
  - Energy and carbon capture
  - Energy efficiency
  - Energy trading
  - Environmental protection
  - Governmental and regulatory administration
  - Green construction
  - Manufacturing
  - Recycling and waste reduction
  - Renewable energy generation
  - Research, design, and consulting services such as environmental auditing, environmental impact reporting, and so on
  - Transportation

International Careers in Sustainability (Note numbers indicate # of jobs available):

- [Wind Energy Jobs](#) (135)
- [Environmental Jobs](#) (91)
- [Consulting Jobs](#) (62)
- [Solar Power Jobs](#) (52)
- [Energy Efficiency Jobs](#) (36)
- [Biofuels and Bioenergy Jobs](#) (32)
- [Hydro Power Jobs](#) (24)
- [Electricity T&D Jobs](#) (24)



- [Energy Policy Jobs](#) (23)
- [Waste to Energy Jobs](#) (11)
- [Combined Heat and Power \(CHP\) Jobs](#)(10)
- [Geothermal Energy Jobs](#) (9)
- [Electrical Energy Storage Jobs](#) (9)
- [Tidal Energy Jobs](#) (8)
- [Wave Power Jobs](#) (7)
- [Thermal Energy Storage Jobs](#) (6)
- [Green Transport Jobs](#) (2)
- [Hydrogen Production & Storage Jobs](#)(2)
- [Carbon Capture and Storage CCS Jobs](#)(1)

5) List of Academic departments/units involved in the delivery of courses. The *Sustainability Graduate Certificate Program* is designed to be interdisciplinary. It includes departments of two colleges:



College of Business (Management Department)

College of Arts & Sciences (Anthropology Department)



6) Detailed discussion of the Program of Study: The *Sustainability Graduate Certificate Program* with a four-course sequence, totaling 12 credits.

The *Sustainability Graduate Certificate Program* is designed for current graduate students and non-degree students. It is designed like similar programs, such as Arizona State University, to engage a diverse group of doctoral and master's students in an education and research-training program to understand, explore, apply, and further develop the science of sustainability. Sustainability at NMSU focuses on integrating curricula across Colleges, such as Business, Agriculture (ACES), Engineering, Health Social Services, and Education. An interdisciplinary approach allows students to gain knowledge in the various sciences of environmental assessment, environmental ethics, and the economic, human behavior, and policy-making aspects of the social sciences to develop professionals knowledgeable in sustainability.

The *Sustainability Graduate Certificate Program* requires completion of four classes (3 credits each): Six credit hours from from Management Department, and six credit hours from Anthropology Department. Total of 12 credit hours, with 3.0 Grade or better, in each of the courses.


**COURSE SEQUENCE:** Part one of the sequence: two sustainability (  focused- or  related-) courses (6 credits) from one department. Part two of the sequence: two sustainability courses from one or more other departments offering sustainability-focused or sustainability-related courses (6 credits).


This program design offers an opportunity for interaction of students with different College and disciplinary backgrounds to focus on interdisciplinary issues of sustainability related to his or her major field of study. The certificate program is administered by the Management Department of the College of Business. With the exception of the option of Summer Study in Costa Rica (HRTM 450), all other courses are face-to-face classroom experiences.


Note: Our *Greening the Curriculum at NMSU* Steering Group ([see listing](#)) of involved department heads, course faculty, and sustainability experts on campus has assessed courses for *Greening the Curriculum at NMSU* for  sustainability-related content, and for  sustainability (see above definitions).

## **REQUIRED COURSE NAMES AND NUMBERS & DESCRIPTIONS**

### **REQUIRED COURSES AND THEIR SEQUENCE:**

FIRST CLASS  BA 550 Special Topics (3 credit hours) - Interdisciplinary seminar in Sustainability Development – no prerequisites.  
Course Description: Examines the principles of environmental assessment and management. Topics include global environmental concerns, industrial environmental management, life cycle assessment, system analysis, process improvement, and sustainable development, among others.

SECOND CLASS  ANTH 536 Anthropology of Development (3 credit hours) – no prerequisites  
Course Description: The study of global processes of social and economic change, and their impact on non-Western societies.

THIRD CLASS  ANTH 538 Plants, Culture, and Sustainable Development (3 credit hours) – no prerequisites  
Course Description: Study of role of indigenous cultures and indigenous knowledge systems in plant domestication, ethnoecology, and preservation of traditional crop diversity. Examination of issues related to conserving cultural diversity, food systems, food security and biodiversity.

FINAL CLASS  MGT 548 Small Business consulting (3 credit hours) –

prerequisite senior standing or consent of instructor; For Certificate Complete BA 550; ANTH 536, ANTH 538  
Course Description: Study, analysis, and presentation of recommendations for solving significant problems confronting small businesses or other type of organization (public, non-profit, etc.) Note: Includes a final project, with at least ten hours spent with an organization doing environmental-sustainability consulting.

***Elective Courses: We recommend taking an additional courses from this list of options (note, some of these courses have prerequisites, please consult the graduate catalog for details)***

**College of Business:**

**Management Department** courses:



MGT 590 Strategic Management (3 credit hours) course

Course Description: Covers the integration of functional, human, technological, and environmental aspects of business within the framework of management policy and strategy formulation.  
Prerequisite: M.B.A. student in his or her final semester. Restricted to majors.



MGT 591 Seminar in Entrepreneurship (3 credit hours) course

Course Description: for students interested in owning and operating their own business; students desiring hands-on, real-time experience in helping start up a business. Prerequisite: M.B.A. student or consent of instructor. Course is same as MGT 461 with differentiated assignments for graduate students. Crosslisted with: MKTG 591.



MGT 655 systems Theory (3 credit hours) course

Course Description: Analysis of organizations from a macro perspective. Topics include organizational theory, organizational design, organizational environment, and sociotechnical systems. Restricted to doctoral students or Consent of instructor for masters students.



MGT 685 Storytelling Consulting Seminar on Sustainability (3 credit hours) course

Course Description: Apply various qualitative story and narrative research methods (plot analysis, script analysis, life history, and restoring) to action research consulting project. Students will conduct story assessment and (propose or enact) intervention with a local consenting organization. Restricted to doctoral students or consent of instructor for masters students.



MGT 598 Independent Study in Sustainability Development (1 to 3 credit hours) course

Course Description: Individual investigations either analytical or experimental. Prerequisite: consent of instructor. A maximum of 6 credits may be earned.



MGT 690 Independent Study in Sustainability Leadership (3 credit hours) course

Course Description: Seminars in selected current topics in the various areas of management. May be repeated for unlimited credit. Restricted to doctoral students. Prerequisite(s): Vary according to seminar being offered.

**Economics and International Business Department course:**



ECON 573 Regulatory Policy and Industry Analysis: Electricity (3 credit hours) course

Course Description: Regulatory policy and economic analysis related to the Electric industry. Topics include: optimal generation mix; ancillary services; environmental policies; rate case procedures and strategies for effective testimony; advanced retail rate design; wholesale exchanges; unbundled transmission tariffs; market institutions and how different markets function; state and federal deregulation policies; Federal Energy Regulatory Commission orders and policies; demand-side management; and regulatory treatment of non-traditional retail services. Consent of instructor required. Prerequisite(s): ECON 571 or consent of instructor.



ECDV 671 Sustainable Economic Development (3 credit hours) course

Course Description: Focuses on the interconnections between economic development and the environment. Provides a broad set of tools and ideas related to the impacts of human activities on the environment. Prerequisites: AEEC 501, AEEC 502 and AEEC 540.

**Accounting and Information Systems Department course:**



BCIS 502 Business Information Systems (3 credit hours) course

Course Description: Analysis of information systems as integral parts

of business organizations, including the responsibility of management to understand their capabilities and uses in handling the organization's information flow and providing appropriate information for decision makers. Special focus will be given to an introduction to Enterprise Resource Planning. Prerequisites: Open to graduate students only.

### **Business Law and Finance Department**



BLAW 530 American Indian Law and Policy (3 credit hours) course

Course Description: This course is divided into two major parts: an historical survey of federal Indian law and policy, and selected topics focusing on contemporary federal Indian law and policy issues and problems. This course assumes that the students have not had any law courses and approaches the topic of the history of federal Indian law and policy from various multidisciplinary and interdisciplinary perspectives.

### **College of Agriculture, Consumer, & Environmental Sciences:**

Hotel Restaurant Tourism Management Department courses



HRTM 450 Special Topics - Summer Study in Costa Rica (3 to 6 credit hours) course

Course Description: The Sustainability Seminar Series is a four-week study abroad experience in Costa Rica centered on sustainability. This summer session will feature a concentration on sustainability in the hospitality industry, one of the country's most valuable exports. Hosted by researchers from the Tropical Agricultural Research and Higher Education Center (CATIE) in Turrialba, Costa Rica, your time abroad will consist of a combination of fieldwork, labs, lectures, and site visits. Note cost is more than \$2,200. Prerequisite: consent of instructor. [See Current Brochure](#).



HRTM 492 Special Research in Sustainability Topic (3 credit hours) course

Course Description: Students and instructor develop a special topic focused on sustainability.

Plant & Environmental Science, Horticulture, and Agronomy Departments'

course:



HORT 485 Vegetable Crop Management (3 credit hours) course

Course Description: Physiological, environmental, and cultural aspects of vegetable crop production. Physiological, environmental, and cultural aspects of vegetable crop production. Co-requisite: AGRO/HORT 365 (Principles of Crop Production), or consent of the instructor. Co-requisite: AGRO/HORT 365 (Principles of Crop Production), or consent of instructor.



HORT/AGRO 515 (cross-listed course in Crop Physiology) (1 to 4 credit hours) course

Course Description: Individual research in a selected subject area of hospitality management. Prerequisite: consent of instructor; Maximum of 4 credits per semester.

#### **History of the program initiative:**

After a Teaching Academy session “Sustainability Across the Curriculum” David Boje of the Management Department, and outgoing chair of Sustainability Council at NMSU submitted a funding application, as outgoing Chair of Sustainability Council that was funded in December. On December 17 2013, the Sustainability Council notification that it succeeded in being awarded 15K FY 2014 of funding from the **President’s Performance Funding** to enact the **Greening of the NMSU Curriculum**, including a faculty coordinator of the initiative, and some money to market the initiative. I am the listed Project Manager, and the budget is administered through the Management Department of the College of Business, with Steve Elias my Department Head as its administrative signatory. The Sustainability Council reviewed this initiative on January 8 2014, which endorsed the project in several unanimous motions. On January 13 there is a second presentation of **Greening of the NMSU Curriculum** to ADAC.

7) Number of courses that can be transferred into a graduate degree program. All courses can transfer into the *Sustainability Graduate Certificate Program* that are approved for a masters degree from the student’s enrolled department and college, or in a Ph.D. program in the student’s enrolled department and college. For non-degree students, a GPA of 3.25 is required to enter the program, plus at least 2 years of relevant work experience in sustainability-related fields. All students in this program must maintain a 3.0 GPA.

8) **Admission requirements:** The *Sustainability Graduate Certificate Program* is for currently enrolled degree seeking students and non-degree seeking students that

meet regular admissions criteria to enroll solely to obtain this certificate. All student applicants must meet the minimum requirements specified in the general regulations and requirements for admission to the Graduate School. This includes non-degree students seeking to develop their skills and certification in sustainability. To be admitted to the *Sustainability Graduate Certificate Program*, applicants must meet the admission requirements of both the New Mexico State University Graduate School, and those of their home College, and Department. To apply, please contact the Management Department. Both non-degree students and current degree-seeking graduate students will be notified via email of their acceptance into the program.

**For current degree-seeking students:** Admission to the [Graduate School](#) requires completion of a Bachelors or other advanced degree with a minimum GPA of 3.0. Students seeking admission must submit an application, transcripts, and \$30 application fee to the NMSU office of [Graduate Student Services](#). Current NMSU graduate students who have already met NMSU Graduate School requirements should request to ADD the *Sustainability Graduate Certificate* to their current degree program by completing and submitting a “Change of Major Request” form. This form will be forwarded to the Management Department for final review and consideration. The department requires evidence of adequate preparation for graduate coursework (GPA of 3.0; 12 hours across at least two departments). Applicants must have earned a B or better in all the *Certificate* courses, or their equivalents, within the 7 years prior to acceptance into the program.

**For non-degrees seeking applicants:** The requirement is an undergraduate GPA of at least 3.25 with 2 or more years of relevant, full-time, post-degree, professional work experience in sustainability-related fields.

9) **Marketing strategy to recruit students.** Presentations by Coordinator to MBA Orientation sessions (note this was done on August 20<sup>th</sup> orientation meeting). Websites for *Greening the Curriculum* feature the *Sustainability Graduate Certificate Program* (<http://greening.nmsu.edu>). In addition, the program coordinator, along with Career Services is featuring a ‘Sustainability Focus’ at two annual career fairs: the September Career Expo, and the February Career Connections. Career Connections has been active in recruiting green employers this year, including outreach to 40,000 in its mailing list. This year \$4,500 will be spent on promoting the sustainability focus in career fairs. NMSU Foundation has established a sustainability-scholarship in each College that is available for both undergraduate and graduate students. The *Greening the Curriculum* coordinator is working with development officers of these colleges to do fund-raising.



## Show your Heart-of-Care



Donate to a Sustainability Scholarship by College or Donate to the Greening the Curriculum operating fund.

This year, the 2014-2015 undergraduate catalogue features a section on sustainability courses. The plan is to do the same in the graduate catalog.

Finally, an app is being designed to appeal to students, because it has a very popular game on it (we are paying the app fee, and game is public domain). This is still in production, and will have information on the Graduate Certificate, and other programs of sustainability at NMSU.

10) Letters of support from the academic dean(s) department head(s) involved in course delivery. See attached signature sheet and letters of support.

11) An evaluation strategy must be included in the proposal. Students and department heads evaluate course through student evaluation forms. In addition the *Greening the Curriculum at NMSU* Steering Group ([see listing](#)) and coordinator review the course content and any practicum experience offered in each class. Department heads also participate in the College of Business in outcomes assessments, which includes portfolios of class projects and presentations.

Table 1: Specifics of Evaluation Strategy and Targets:

Measures/ Targets	Dec 2014	Dec 2015	Dec 2016
Departments participating in sustainability programs	Set Baseline database	+5%	+10%
Sustainability program enrollment diversity Hispanic	Set baseline database	+3%	+5%
Sustainability program enrollment diversity (female' Hispanic & other minority participation)	Set baseline database	+3%+2%TBD	+5%+5%TBD
Courses with international sustainability service and outreach components	Set baseline database	+10%	+15%
Courses with Energy savings Projects	Set baseline database	+5%	+10%
Estimated savings of those projects	Set baseline database	\$20,000	\$40,000
Courses with sustainability projects	Set baseline database	+10%	+15
Faculty with sustainability related donations, grants and contracts	Set baseline database	+10%	+15%
Sustainability related jobs found by students	Set baseline database	+5%	+10%

**Table 2: Vision 2020 and *Sustainability Graduate Certificate Program***

1. Graduation – Teaching, Learning & Programs – <i>Provide effective academic programs, stellar teaching and learning, and enhanced student engagement to advance highly capable graduates</i>	Increases in enrollment from 3% from Baseline by 2014: graduating students; 5% increases from the current course offerings; 5% increase in departments participating with course offerings that are sustainability-focused or sustainability-related.
2. Diversity – <i>Be a model of student, faculty and staff diversity at all levels</i>	Increase in diversity enrollment by 3% by FY 2014: NMSU currently has 45% Hispanic enrollment, which we intend to increase in this program; includes 3% increase in female enrollment in the sustainability-focused or sustainability-related courses.
3. Internationalization – <i>Effectively prepare students for a global society</i>	Increase 10% in International courses that are sustainability-focused or sustainability-related; includes 10% increase in course projects that focus on international cases and service projects. Talloires Declaration signed by NMSU, item 9 is to broaden service and outreach of sustainability both nationally and internationally
4. Research & Creative Activity – <i>Be the catalyst for promoting discovery, encouraging innovation, sparking economic advancement, and inspiring creative achievement</i>	Measure is number of these energy saving projects, and secondly their estimate dollar savings to NMSU and its communities. FY 2014 goal is \$20,000 in reported project savings to university and/or community
5. Economic Development – <i>Be a driving force for economic progress in New Mexico</i>	We will assess number of projects in courses students are taking as part of Sustainability minor, and in sustainability-focused or sustainability-related courses.
6. Resource Stewardship — <i>Increase philanthropy and alternative revenue to support teaching, research and service</i>	Alumni donations increase of 10% in FY 2014, specifically for sustainability efforts to support teaching, research, and service. Currently 106/694 (15%) faculty are doing grants and research related to sustainability
7. Community – Service, Extension & Outreach — <i>Be a model for community engagement at all levels through innovative and exceptional outreach activity</i>	This is measured by students picking sustainability careers. Part of our project is to work with career center, have booths in 3 career expos in FY 2014, training for advising across the campus, so counselors have access to <a href="#">sustainability careers</a> .

12) A statement of resource needs for implementation must also be included. There are no additional resources needed for the *Sustainability Graduate Certificate Program*. The Management Department provides regular support to other department in terms of brochures, and coordination.

13) Name and contact information of the faculty program coordinator.

Contact Person: David M. Boje, *Greening the Curriculum* Coordinator email: [dboje@nmsu.edu](mailto:dboje@nmsu.edu) phone: 575-532-1693 or 575-646-1201

### **Process of Approval**

- a. Once a department decides to develop a certificate proposal, a Letter of Intent must be sent to the Accreditation Liaison Officer of the Higher Learning Commission which, at New Mexico State University is the Associate Provost for Accreditation, Outcomes and Academic Program Review.
- b. Once the proposal has been approved by all bodies at NMSU and has a Classification Instructional Program Code from the New Mexico Higher Education Department, the Accreditation Liaison Officer will submit the certificate proposal to the Higher Learning Commission.
- c. Certificate programs *that do not require new resources* and can be implemented with existing faculty, existing courses and existing facilities will be approved internally by the:
  - a. a) Department Head(s),
  - b. b) The Academic Dean(s),
  - c. c) Graduate Council and the Graduate School,
  - d. d) the Associate Dean's Council,
  - e. e) the Faculty Senate,
  - f. f) the Academic Dean's Council, and
  - g. g) the Executive Vice President and Provost for Academic Affairs.

The proposal must be submitted four weeks prior to the monthly meeting of the Graduate Council. The proposal will be put on the agenda of the Graduate Council as soon as feasible.

Faculty must give an oral presentation of the proposal to the Graduate Council and answer questions concerning the proposal. Please contact the other approval bodies to also be placed on their agenda.