

University Course and Programs Committee

Minutes

July 23, 2010

MEMBERS PRESENT:

Voting: Bob Brady, Bill Curington, Judy Ganson, Carol Gattis, David Gay, Donna Graham, Patricia Koski, Janet Penner-Williams, Bill Springer

Non-Voting: Lisa Kulczak, Karen Turner and William Warnock

MEMBERS ABSENT:

Voting: Chuck Adams, Suzanne Area, Cathy Chick, Dawn Farver, Joel Freund, Andrew Horowitz, Tim Killian, Terry Martin, Betsy Orr, Chuck Rotolo

Non-Voting: Gary McHenry

GUESTS: Stephen Boss and Tahar Messadi

Bill Curington, who substituted for Terry Martin, called the meeting to order at 2:32P.M.

1. The minutes for the May 28, 2010 meeting were approved. There was no meeting during June.
2. Course Change Proposals:
 1. The Undergraduate course change proposals ([Table A](#)) were approved without opposition and will be forwarded for the September 2010 Faculty Senate meeting.
 2. Graduate and Dual Course Change Proposals ([Tables B & C](#)) were approved without opposition and will be forwarded for the August Graduate Council meeting.
3. Old Business:
4. New Business:
 - a. Proposed undergraduate program change for the Bumpers College of Agriculture, Food and Life Sciences, School of Human Environmental Science – BSHES – Human Development, Family Sciences and Rural Sociology ([Table One](#), [Attachment 1A](#) & Attachment 1B) was presented by Donna Graham. The program change requested to change the program name from “Human Development, Family Sciences and Rural Sociology” to “Human Development and Family Sciences”. The proposal was approved without opposition and will be forwarded for consideration at the September 2010 Faculty Senate meeting.
 - b. Proposed undergraduate program change from the Walton College of Business – Walton College of Business Dean - WERP-M, Minor in Enterprise Resource Planning ([Table 2](#), [Attachment 2A](#)) was

presented by Bill Curington. The proposal requested to substitute ACCT 2013 for ACCT 3723 and add ISYS 4293, ISYS 4453 and TLOG 3623 as choices from which courses can be selected. The proposal was approved without opposition and will be forwarded for consideration at the September 2010 Faculty Senate meeting.

c. Proposed undergraduate program change from the Walton College of Business – Department of Marketing and Logistics - TRNSBS, BSBA, Transportation ([Table 2](#), [Attachment 2B](#)) was presented by Bill Curington. The proposal requested to delete ECON 4653 and replace it with ECON 3853; add four ISYS courses to those acceptable to fulfill the information systems collateral requirement and rename the remaining courses to be consistent with the Information Systems Department curriculum changes. The proposal was approved without opposition and will be forwarded for consideration at the September 2010 Faculty Senate meeting.

d. Proposed undergraduate program change for Undergraduate Interdisciplinary Programs – SUST-M – Foundations of Sustainability Minor ([Table 3](#), [Attachment 3A](#) and [Attachment 3B](#)) was presented by Stephen Boss and Tahar Messadi. The proposal requested to create a new minor and add three new courses. After a lengthy discussion the proposal was tabled until it can be resubmitted following additional college faculty review and approval.

5. Other Business: None

Meeting was adjourned at 3:23 PM.

TABLE A**UCPC****Undergraduate Courses****July 23, 2010**

COLL	DEPARTMENT NAME	DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
AFLS	Human Environmental Sciences	HESC	HESC	4901	Apparel Studies Pre-Study Tour	U to D	CD, CEUDC	1	Fall 2011

TABLE B**UCPC****Graduate Courses****July 23, 2010**

COLL	DEPARTMENT NAME	DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
ARSC	Drama	DRAM	DRAM	5453 to 545V	Musical Theatre Performance	G	CD, CHN, CCH	3 to variable	Fall 2011
ARSC	Drama	DRAM	DRAM	5552	Graduate Voice and Speech II	G	ANC	2	Fall 2011
ARSC	Drama	DRAM	DRAM	5562	Graduate Voice and Speech III	G	ANC	2	Fall 2011
ARSC	Drama	DRAM	DRAM	5572	Graduate Voice and Speech IV	G	ANC	2	Fall 2011
ARSC	Psychology	PSYC	PSYC	608V to 6083	Clinical Practicum IV to Clinical Supervision & Consultation	G	CT, CD, CHN, CCH	variable to 3	Fall 2011
ARSC	School of Social Work	SCWK	SCWK	596V	Independent Study	G	ANC	variable	Fall 2011

TABLE C**UCPC****Dual Courses****July 23, 2010**

COLL	DEPARTMENT NAME	DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
AFLS	Human Environmental Sciences	HESC	HESC	4901	Apparel Studies Pre-Study Tour	D from U	CD, CEUDC	1	Fall 2011
ARSC	History	HIST	HIST	4843	Modern Japan	D	ELC	3	Fall 2011
EDUC	Curriculum & Instruction	CIED	CIED	4433	The Moral Mind in Action	D	ANC	3	Fall 2011
EDUC	Curriculum & Instruction	CIED	CIED	4443	Moral Courage	D	ANC	3	Fall 2011

KEY

ACTION

ANC= ADD NEW COURSE

ELC= ELIMINATE COURSE

CT= CHANGE TITLE

CD= CHANGE DESCRIPTION

CHN= CHANGE COURSE NUMBER FROM ___TO___

CCH= CHANGE CREDIT HOURS FROM ___TO___

CL= CROSS LISTED

CEUDC= CHANGE EXISTING UNDERGRADUATE COURSE TO DUAL CREDIT

CEUGC= CHANGE EXISTING UNDERGRADUATE COURSE TO GRADUATE CREDIT

CEGUC= CHANGE EXISTING DUAL/GRADUATE COURSE TO UNDERGRADUATE CREDIT

OTH= OTHER

RA= REACTIVATE COURSE

IN= INACTIVATE COURSE

TABLE A**UCPC****Undergraduate Courses****July 23, 2010**

COLL	DEPARTMENT NAME	DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
AFLS	Human Environmental Sciences	HESC	HESC	4901	Apparel Studies Pre-Study Tour	U to D	CD, CEUDC	1	Fall 2011

TABLE B**UCPC****Graduate Courses****July 23, 2010**

COLL	DEPARTMENT NAME	DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
ARSC	Drama	DRAM	DRAM	5453 to 545V	Musical Theatre Performance	G	CD, CHN, CCH	3 to variable	Fall 2011
ARSC	Drama	DRAM	DRAM	5552	Graduate Voice and Speech II	G	ANC	2	Fall 2011
ARSC	Drama	DRAM	DRAM	5562	Graduate Voice and Speech III	G	ANC	2	Fall 2011
ARSC	Drama	DRAM	DRAM	5572	Graduate Voice and Speech IV	G	ANC	2	Fall 2011
ARSC	Psychology	PSYC	PSYC	608V to 6083	Clinical Practicum IV to Clinical Supervision & Consultation	G	CT, CD, CHN, CCH	variable to 3	Fall 2011
ARSC	School of Social Work	SCWK	SCWK	596V	Independent Study	G	ANC	variable	Fall 2011

TABLE C**UCPC****Dual Courses****July 23, 2010**

COLL	DEPARTMENT NAME	DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
AFLS	Human Environmental Sciences	HESC	HESC	4901	Apparel Studies Pre-Study Tour	D from U	CD, CEUDC	1	Fall 2011
ARSC	History	HIST	HIST	4843	Modern Japan	D	ELC	3	Fall 2011
EDUC	Curriculum & Instruction	CIED	CIED	4433	The Moral Mind in Action	D	ANC	3	Fall 2011
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KEY

ACTION

ANC= ADD NEW COURSE
ELC= ELIMINATE COURSE
CT= CHANGE TITLE
CD= CHANGE DESCRIPTION
CHN= CHANGE COURSE NUMBER FROM ___TO___
CCH= CHANGE CREDIT HOURS FROM ___TO___
CL= CROSS LISTED
CEUDC= CHANGE EXISTING UNDERGRADUATE COURSE TO DUAL CREDIT
CEUGC= CHANGE EXISTING UNDERGRADUATE COURSE TO GRADUATE CREDIT
CEGUC= CHANGE EXISTING DUAL/GRADUATE COURSE TO UNDERGRADUATE CREDIT
OTH= OTHER
RA= REACTIVATE COURSE
IN= INACTIVATE COURSE

University Course and Programs Committee
23-Jul-10

UNDERGRADUATE PROGRAM CHANGES

TABLE ONE

Bumpers College of Agriculture, Food and Life Sciences

School of Human Environmental Sciences

HDFSBS - BSHEs, Human Development, Family Sciences and Rural Sociology - Attachment 1A

Proposal requests to change the program name from "Human Development, Family Sciences and Rural Sociology" to "Human Development and Family Sciences" as specified in Section V of Attachment 1A.

TABLE TWO

Walton College of Business

Walton College of Business Dean

WERP-M - Minor in Enterprise Resource Planning - Attachment 2A

Proposal requests to substitute ACCT 2013 for ACCT 3723 and add ISYS 4293, ISYS 4453 and TLOG 3623 as choices from which courses can be selected as specified in Section V of Attachment 2A.

Department of Marketing and Logistics

TRNSBS - BSBA, Transportation - Attachment 2B

Proposal requests to delete ECON 4653 and replace it with ECON 3853; add four ISYS courses to those acceptable to fulfill the information systems collateral requirement and rename the remaining courses to be consistent with Information Systems Department curriculum change as specified in Section V of Attachment 2B.

PAGE TWO

TABLE THREE

Undergraduate Interdisciplinary Programs

SUST-M - Foundations of Sustainability Minor - Attachments 3A and 3B

Proposal requests to add a new minor as specified in Section VII of Attachment 3A. Three new course proposals are also attached to the program change form. Additional information is contained in the Letter of Notification - Attachment 3B.

ATTACHMENT 1A

Academic Policy Series

1622.20A

ADD, CHANGE OR DELETE UNIT, PROGRAM REQUIREMENTS, OR ACADEMIC POLICIES

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit or to change program policies. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair Date Submitted Graduate Council Chair Date
College Dean Date Faculty Senate Chair Date
Honors College Dean Date Provost Date
Core Curriculum Committee Date Board of Trustees Approval/Notification Date
University Course and Programs Committee Date Arkansas Higher Education Coordinating Board Approval/Notification Date

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: [X] Major/Field of Study [] Minor [] Other Unit [] Policy
Level: [X] Undergraduate [] Graduate [] Law Effective Catalog Year 2010
Current Name BSHES, Human Development, Family Sciences and Rural Sociology
College, School, Division AFLS Department Code HESC
Current Code (6 digit Alpha) HDFSBS Proposed Code (6 digit Alpha)
Prior approval from the Office of the Registrar is required.
[] Interdisciplinary Program CIP Code 19.0701
Prior assignment from Office of Institutional Research is required.
Proposed Name BSHES, Human Development and Family Sciences
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

[] For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE
http://www.arkansashighered.com/pdfs/BookAppNewProgramCriteriaandProceduresRevised2005.pdf.
[] Program proposal uses courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: _____

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year ____
No new students admitted to program after Term: ____ Year: ____
Allow students in program to complete under this program until Term: ____ Year: ____

SECTION V: Proposed Changes to an Existing Program or Program Policies

Insert here a statement of the exact changes to be made: The name of the program will change from Human Development, Family Sciences, and Rural Sociology to Human Development and Family Sciences.

Check if either of these boxes apply and provide the necessary signature:

- Program change proposal adds courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: _____
- Program change proposal deletes courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: _____

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change in Program Policies

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

Because coursework in rural sociology is lacking in the current program, it is appropriate to remove "rural sociology" from the title of the degree.

SECTION VII: Catalog Text and Format

In the box below, insert the current catalog text which is to be changed, with changes highlighted with the color yellow. Include all proposed changes identified in Section V. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate. If you are proposing a new program, give proposed text with all of the elements listed below. If you are proposing modified text, include these elements as appropriate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.
- State eight-semester plan requirements

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

HUMAN DEVELOPMENT; ~~and~~ FAMILY SCIENCES;

~~AND RURAL SOCIOLOGY (HDFSRS)(HDFSBS)~~

~~Sue S. Martin~~ Frank L. Farmer

Area C coordinator

11804 Home Economics Building

479-575-43064578

Students majoring in human development and family sciences prepare

for one of the fastest growing employment opportunities in the country. The human services area includes jobs that serve people from conception through the last stages of life. Students develop skills for working with individuals and families in governmental, private, and nonprofit organizations. Three concentrations are offered:

Child Development (CDEV)

This concentration is for students who desire in-depth knowledge of children and programs for children from birth to age 12. The focus on children covers issues from the prenatal to early adolescence. Graduates may work as preschool teachers, day-care directors, specialists in the field of child life, and as child advocates.

Birth through Kindergarten (BRKD)

The knowledge and skills developed in this program will prepare students to work with children from birth through five years of age in various settings.

Lifespan (LSPN)

This area of study covers the care issues faced by families and individuals in contemporary society. The knowledge and skills developed in this program will prepare the student to work in areas such as aging, parent education, financial and consumer counseling, youth services, and other human service type careers.

Requirements for a Major in Human Development, and Family Sciences and **Rural Sociology** (See page 40 for University Core and page 71 for B.S.H.E.S. requirements)

English/Communications (12 hours)

English University Core Courses (6 hours)

ENGL 2003 Advanced Comp or Exemption Elective – See page 41 for exemption information

COMM 1313 Fundamentals of Communication

Mathematics University Core Course (3 hours)

MATH 1203 College Algebra or higher level math

Science University Core Courses (8 hours)

Fine Arts/Humanities University Core Courses (6 hours)

Select in two categories from “State Minimum Arts/Humanities Core” (one course from section a and one course from b, c, or d. See page 40.)

US History University Core Course (3 hours)

Social Sciences University Core Courses (9 hours)

PSYC 2003 General Psychology

SOCI 2013 General Sociology or RSOC 2603 Rural Sociology

HESC 2413 Family Relations

Additional Requirements for Child Development Concentration (53 hours)

HESC 1213 Nutrition in Health

HESC 1501 Orientation to HESC

HESC 2402 / 2401L Infant and Toddler Development and lab

HESC 2433 Child Development

HESC 3402 / 3401L Child Guidance and lab

HESC 3423 Adolescent Development

HESC 4423 Adult Development

HESC 4463 Administration and Evaluation of Child Development

HESC 4472 / 4472L Child Development Practicum and lab

HESC 4453 Parenting and Family Dynamics

HESC 4493 Public Policy Advocacy for Children and Families

HESC 4753 Family Financial Management

SCWK 3633 Problems of Child Welfare

CIED 3023 Survey of Exceptionalities

CIED 3103 Children’s Literature

CIED 3113 Emergent and Developmental Literacy

Select 6 hours from

HESC 1403 Lifespan Development
 HESC 2443 The Hospitalized Child
 HESC 3443 Families in Crisis
 HESC 3763L Family Resource Management Lab
 HESC 4433 Dynamic Family Interaction
 HESC 4443 Gerontology
 HESC 4483 Internship in HDFS
 RSOC 2603 Rural Sociology
 RSOC 4603 Environmental Sociology
 RSOC 4623 Introduction to Community Development
 General Electives (30 hours)
 124 Total Hours
 Dale Bumpers College of Agricultural, Food and Life Sciences
 University of Arkansas, Fayetteville 97
 Additional requirements for Birth through Kindergarten Concentration
 (58 hours)
 HESC 1213 Nutrition in Health
 HESC 1411L Observation of Children
 HESC 1501 Orientation to HESC
 HESC 2402/2401L Infant & Toddler Development and lab
 HESC 2433 Child Development
 HESC 3402/3401L Child Guidance and lab
 HESC 3423 Adolescent Development
 HESC 4313 Building Family & Community Relationships
 HESC 4332/4332L Curriculum & Assessment Birth to Three Yrs and lab
 HESC 4342/4342L Curriculum & Assessment Three Yrs-Kindergarten
 and lab
 HESC 4373 Field Experience in Birth-Kindergarten Programs
 HESC 4423 Adult Development
 HESC 4453 Parenting and Family Dynamics
 HESC 4463 Administration & Evaluation of Child Development
 Programs
 HESC 4753 Family Financial Management
 HIST 3383 Arkansas & the Southwest
 SCWK 3633 Problems of Child Welfare
 CIED 3023 Survey of Exceptionalities
 CIED 3103 Children's Literature
 CIED 3113 Emergent and Developmental Literacy
 General Electives (25 hours)
 124 Total Hours
 Additional requirements for Lifespan Concentration (49 hours)
 HESC 1213 Nutrition in Health
 HESC 1403 Lifespan Development
 HESC 1501 Orientation to HESC
 HESC 2433 Child Development
 HESC 3423 Adolescent Development
 HESC 3443 Families in Crisis
 HESC 4423 Adult Development
 HESC 4433 Dynamic Family Interaction
 HESC 4443 Gerontology
 HESC 4453 Parenting and Family Dynamics
 HESC 4463 Administration & Evaluation of Child Development
 Programs
 HESC 4493 Public Policy Advocacy
 HESC 4753 Family Financial Management
 SCWK 3163 On Death and Dying
 CNED 3053 The Helping Relationship
 Select 6 hours from

HESC 2402/2401L Infant & Toddler Development and lab
HESC 2443 The Hospitalized Child
HESC 3402/3401L Child Guidance and lab
HESC 3763L Family Resource Management Lab
HESC 4483 Internship in Human Development and Family Studies
RSOC 2603 Rural Sociology
RSOC 4603 Environmental Sociology
RSOC 4623 Introduction to Community Development
Statistics and Research Methods (6 hours)
General Electives (28 hours)
124 Total Hours

Human Development ~~and~~ Family Sciences ~~and Rural Sociology~~ Eight-Semester Degree Program with Child Development Concentration
Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

3 ENGL 1013 Composition I
1 HESC 1501 Orientation to HESC
3 COMM 1313 Fundamentals of Communications
3 MATH Core elective
3 History Core Elective
3 Fine Arts Core Elective
16 Semester hours

3 PSYC 2003 General Psychology
4 Science Core Elective
3 HESC 2413 Family Relations
3 ENGL 1023 Composition II
3 General Elective
16 Semester hours

3 HESC 1213 Nutrition in Health
3 HESC 2402/2401L Infant & Toddler Development and lab
3 Humanities Core Elective
3 General Elective
4 Science University Core Elective
16 Semester hours

3 HESC 2433 Child Development
3 ENGL 2003 Advanced Composition or Exemption Elective
3 SOCI 2013 General Sociology or RSOC 2603 Rural Sociology
6 General Electives
15 Semester hours

3 CIED 3103 Children's Literature
3 CIED 3113 Emergent & Developmental Literacy
3 SCWK 3633 Problems of Child Welfare
3 HESC 3402/3401L Child Guidance and lab
3 CDEV Elective
15 Semester hours

3 HESC 3423 Adolescent Development
4 HESC 4472/4472L Child Development Practicum and lab
3 CIED 3023 Survey of Exceptionalities
3 CDEV Elective
3 General Elective
16 Semester hours

3 HESC 4753 Family Financial Management
3 HESC 4423 Adult Development
3 HESC 4463 Administration & Evaluation of Child Development Programs
3 HESC 4493 Public Policy Advocacy
3 General Electives
15 Semester hours

3 HESC 4453 Parenting and Family Dynamics
12 General Electives
15 Semester hours
124 Total Hours

Human Development ~~and~~ Family Sciences ~~and Rural Sociology~~ Eight-Semester Degree Program with Birth through Kindergarten Concentration
Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

3 ENGL 1013 Composition I
1 HESC 1501 Orientation to HESC
3 COMM 1313 Fundamentals of Communications
3 MATH Core Elective
3 Fine Arts Core Elective
3 General Elective
16 Semester hours

3 HESC 2413 Family Relations
3 PSYC 2003 General Psychology
3 ENGL 1023 Composition II
4 Science Core Elective
3 General Elective
16 Semester hours

3 HESC 1213 Nutrition in Health
3 HESC 2402/2401L Infant & Toddler Development and lab
4 Science Core Elective
3 SOCI 2013 General Sociology or RSOC 2603 Rural Sociology
3 General Electives
16 Semester hours

3 HESC 2433 Child Development
1 HESC 1411L Observation of Children
3 ENGL 2003 Advanced Composition or Exemption Elective
3 History Core Elective
6 General Electives
16 Semester hours

3 HESC 3402/3401L Child Guidance and lab
3 CIED 3103 Children's Literature
3 CIED 3113 Emergent & Developmental Literacy
3 SCWK 3633 Problems of Child Welfare
3 General Elective
15 Semester hours

3 HESC 3423 Adolescent Development
4 HESC 4332/4332L Curriculum & Assessment Birth to Three Year and lab
3 HESC 4453 Parenting and Family Dynamics
3 CIED 3023 Survey of Exceptionalities
3 General Elective
16 Semester hours

3 HESC 4753 Family Financial Management
3 HESC 4423 Adult Development
3 HESC 4463 Administration & Evaluation of Child Development Programs
4 HESC 4342/4342L Curriculum and Assessment Three to Kindergarten and Lab
1 General Elective
14 Semester hours

3 HESC 4313 Building Family & Community Relationships
3 HESC 4373 Field Experience in Birth to Kindergarten Setting
3 HIST 3383 Arkansas and the Southwest
3 Humanities Core Elective
3 General Electives
15 Semester hours
124 Total Hours

Human Development ~~and~~ Family Sciences ~~and Rural Sociology~~ Eight-Semester Degree Program with Life Span Concentration
Students wishing to follow the degree plan should see page 42 in the Academic Regulations section for university requirements of the program.

3 ENGL 1013 Composition I
1 HESC 1501 Orientation to HESC

3 MATH Core Elective
3 HESC 1403 Lifespan Development
3 Fine Arts Core Elective
3 General Elective
16 Semester hours

3 PSYC 2003 General Psychology
4 Science Core Elective
3 HESC 2413 Family Relations
3 ENGL 1023 Composition II
3 General Elective
16 Semester hours

3 HESC 1213 Nutrition in Health
3 History Core Elective
4 Science Core Elective
3 COMM 1313 Fundamentals of Communications
3 General Elective
16 Semester hours

3 HESC 2433 Child Development
3 HESC 3423 Adolescent Development
3 SOCI 2013 General Sociology or RSOC 2603 Rural Sociology
3 Humanities Core Elective
3 General Elective
15 Semester hours

3 HESC 3443 Families in Crisis
3-4 Statistics Elective. Select from PSYC 2013 Introduction to Statistics or
STAT 2303 Principles of Statistics or SOCI 3303/3301L Social Data and
Analysis and lab or WCOB 1033 Data Analysis and Interpretation
3 ENGL 2003 Advanced Composition or Exemption Elective
3 LSPN Elective
3-4 General Elective
15-16 Semester hours

3 SCWK 3163 On Death and Dying
3 Research Methods Elective: Select from PSYC 3073 Research Methods or
SOCI 3313 or SCWK 4073
3 LSPN Elective
6 General Electives
15 Semester hours

3 HESC 4493 Public Policy Advocacy
3 HESC 4753 Family Financial Management
3 HESC 4453 Parenting and Family Dynamics
3 HESC 4423 Adult Development
3 HESC 4463 Administration & Evaluation of Child Development Programs
15 Semester hours

3 HESC 4433 Dynamic Family Interaction
3 HESC 4443 Gerontology
3 CNED 3053 The Helping Relationship
6-7 General Electives
15-16 Semester hours
124 Total Hours

Minor in Human Development and Family Sciences
(HDFS-M)

18 hours to include the following:

HESC 1403 and HESC 2413

Select 12 hours from the following:

HESC 2402/2401L, HESC 2433, HESC 2443, HESC 3402/3401L,
HESC 3423, HESC 3443, HESC 3763L, HESC 4423, HESC
4443, HESC 4453, HESC 4463, HESC 4493, HESC 4753, RSOC
2603, RSOC 4603, RSOC 4623

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____

DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
Initials _____ Date _____

Distribution

Notification to:

- (1) College
- (2) Department
- (3) Admissions
- (4) Institutional Research
- (5) Continuing Education
- (6) Graduate School
- (7) Treasurer
- (8) Undergraduate Program Committee

7/2/07

University Course and Programs Committee
23-Jul-10

UNDERGRADUATE PROGRAM CHANGES

TABLE ONE

Bumpers College of Agriculture, Food and Life Sciences

School of Human Environmental Sciences

HDFSBS - BSHEP, Human Development, Family Sciences and Rural Sociology - Attachment 1A

Proposal requests to change the program name from "Human Development, Family Sciences and Rural Sociology" to "Human Development and Family Sciences" as specified in Section V of Attachment 1A.

TABLE TWO

Walton College of Business

Walton College of Business Dean

WERP-M - Minor in Enterprise Resource Planning - Attachment 2A

Proposal requests to substitute ACCT 2013 for ACCT 3723 and add ISYS 4293, ISYS 4453 and TLOG 3623 as choices from which courses can be selected as specified in Section V of Attachment 2A.

Department of Marketing and Logistics

TRNSBS - BSBA, Transportation - Attachment 2B

Proposal requests to delete ECON 4653 and replace it with ECON 3853; add four ISYS courses to those acceptable to fulfill the information systems collateral requirement and rename the remaining courses to be consistent with Information Systems Department curriculum change as specified in Section V of Attachment 2B.

PAGE TWO

TABLE THREE

Undergraduate Interdisciplinary Programs

SUST-M - Foundations of Sustainability Minor - Attachments 3A and 3B

Proposal requests to add a new minor as specified in Section VII of Attachment 3A. Three new course proposals are also attached to the program change form. Additional information is contained in the Letter of Notification - Attachment 3B.

ATTACHMENT 2B

Academic Policy Series

1622.20A

ADD, CHANGE OR DELETE UNIT, PROGRAM REQUIREMENTS, OR ACADEMIC POLICIES

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit or to change program policies. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair Date Submitted Graduate Council Chair Date
College Dean Date Faculty Senate Chair Date
Honors College Dean Date Provost Date
Core Curriculum Committee Date Board of Trustees Approval/Notification Date
University Course and Programs Committee Date Arkansas Higher Education Coordinating Board Approval/Notification Date

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: [X] Major/Field of Study [] Minor [] Other Unit [] Policy
Level: [X] Undergraduate [] Graduate [] Law Effective Catalog Year

Program changes are effective with the next available catalog. See Academic Policy Series 1622.20

Current Name BSBA, Major in Transportaion

College, School, Division WCOB Department Code MKTL

Current Code (6 digit Alpha) TRNSBS Proposed Code (6 digit Alpha)
Prior approval from the Office of the Registrar is required.

[] Interdisciplinary Program CIP Code 52.0203
Prior assignment from Office of Institutional Research is required.

Proposed Name
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

[] For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE
http://www.arkansashighered.com/pdfs/BookAppNewProgramCriteriaandProceduresRevised2005.pdf.

[] Program proposal uses courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here:

SECTION IV: Eliminate an Existing Program/Unit

Code/Name Effective Catalog Year
No new students admitted to program after Term: Year:
Allow students in program to complete under this program until Term: Year:

SECTION V: Proposed Changes to an Existing Program or Program Policies

Insert here a statement of the exact changes to be made: The Transportation and Logistics major requires 6 hours of courses from a single collateral. The Information Systems department recently revised their curriculum leaving the information

systems collateral in transportation and logistics with only a single course. After consultation with the Information Systems department the Marketing & Logistics department proposes adding four additional ISYS courses to those acceptable to fulfill the information systems collateral requirement and retitle the remaining course to be consistent with Information Systems Department curriculum change. In addition, after consultation with the Economics Department, ECON 4653 is being deleted and replaced with ECON 3853, Emerging Markets.

Check if either of these boxes apply and provide the necessary signature:

- Program change proposal adds courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: _____
- Program change proposal deletes courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: _____

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change in Program Policies

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

The change simply reinstates the information system collateral in the transportation and logistics majors after the Information Systems department revised their curriculum.

SECTION VII: Catalog Text and Format

In the box below, insert the current catalog text which is to be changed, with changes highlighted with the color yellow. Include all proposed changes identified in Section V. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate. If you are proposing a new program, give proposed text with all of the elements listed below. If you are proposing modified text, include these elements as appropriate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.
- State eight-semester plan requirements

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

Transportation and Logistics Major

The major in transportation and logistics is designed to prepare students for careers in carrier management and logistics management. Carrier management is the management of the domestic and international modes of transportation. Logistic management applies analytical techniques and uses the systems approach in managing the flow of materials into and through the production and manufacturing processes of a firm to its customers.

Basic employment opportunities exist in marketing, sales, and operations positions with carriers in all transportation modes, and in positions with shippers having responsibility in one or more of the areas under logistics management, warehousing, packaging, and materials handling. Opportunities also exist in governmental agencies.

Complete the requirements for a B.S.B.A. degree as listed on page 209.	Hours
Total General Education	60
Walton College Core Requirements (See page 209)	33
Course Requirements in the Major	24
TLOG 3443 Principles of Transportation	3
TLOG 3613 Business Logistics	3
TLOG 3623 Purchasing and Inventory Systems	3
TLOG 4633 Transportation Carrier Management	3
TLOG 4643 International Transportation and Logistics	3
TLOG 4653 Transportation and Logistics Strategy	3
Plus two classes (six hours) from a single area:	6
Information Systems:	
ISYS 2263 Introduction to Information Systems	3
ISYS 3293 System Analysis and Design	3
ISYS 4243 Current Topics in Computer Information	3
ISYS 4293 Business Intelligence	3
WCOB 4213 ERP Fundamentals	3
Marketing:	
MKTG 4343 Selling and Sales Management	3
MKTG 3633 Marketing Research	3
MKTG 4633 Global Marketing	3
MKTG 4433 Retail Strategy	3

International:	
ECON 4633 International Trade Policy	3
ECON 4643 International Macroeconomics and Finance	3
ECON 3853 Emerging Markets	3
FINN 3703 International Finance	3
MGMT 4853 International Management	3
MGMT 4833 International Marketing	3
Junior- senior-level electives within Walton College	15
Maximum of 27 hours of MKTG courses in department (core, major, elective). More than 27 hours allowed if the extra courses are part of interdisciplinary minor or collateral track.	
Total Walton College Requirements	60
Total Degree Requirements	126

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____

DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
 Initials _____ Date _____

Distribution

Notification to:
 (1) College (2) Department (3) Admissions (4) Institutional Research (5) Continuing Education (6) Graduate School
 (7) Treasurer (8) Undergraduate Program Committee

University Course and Programs Committee
23-Jul-10

UNDERGRADUATE PROGRAM CHANGES

TABLE ONE

Bumpers College of Agriculture, Food and Life Sciences

School of Human Environmental Sciences

HDFSBS - BSHEs, Human Development, Family Sciences and Rural Sociology - Attachment 1A

Proposal requests to change the program name from "Human Development, Family Sciences and Rural Sociology" to "Human Development and Family Sciences" as specified in Section V of Attachment 1A.

TABLE TWO

Walton College of Business

Walton College of Business Dean

WERP-M - Minor in Enterprise Resource Planning - Attachment 2A

Proposal requests to substitute ACCT 2013 for ACCT 3723 and add ISYS 4293, ISYS 4453 and TLOG 3623 as choices from which courses can be selected as specified in Section V of Attachment 2A.

Department of Marketing and Logistics

TRNSBS - BSBA, Transportation - Attachment 2B

Proposal requests to delete ECON 4653 and replace it with ECON 3853; add four ISYS courses to those acceptable to fulfill the information systems collateral requirement and rename the remaining courses to be consistent with Information Systems Department curriculum change as specified in Section V of Attachment 2B.

PAGE TWO

TABLE THREE

Undergraduate Interdisciplinary Programs

SUST-M - Foundations of Sustainability Minor - Attachments 3A and 3B

Proposal requests to add a new minor as specified in Section VII of Attachment 3A.

Three new course proposals are also attached to the program change form. Additional information is contained in the Letter of Notification - Attachment 3B.

ATTACHMENT 2B

Academic Policy Series

1622.20A

ADD, CHANGE OR DELETE UNIT, PROGRAM REQUIREMENTS, OR ACADEMIC POLICIES

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit or to change program policies. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair Date Submitted Graduate Council Chair Date
College Dean Date Faculty Senate Chair Date
Honors College Dean Date Provost Date
Core Curriculum Committee Date Board of Trustees Approval/Notification Date
University Course and Programs Committee Date Arkansas Higher Education Coordinating Board Approval/Notification Date

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: [X] Major/Field of Study [] Minor [] Other Unit [] Policy
Level: [X] Undergraduate [] Graduate [] Law Effective Catalog Year

Program changes are effective with the next available catalog. See Academic Policy Series 1622.20

Current Name BSBA, Major in Transportaion

College, School, Division WCOB Department Code MKTL

Current Code (6 digit Alpha) TRNSBS Proposed Code (6 digit Alpha)
Prior approval from the Office of the Registrar is required.

[] Interdisciplinary Program CIP Code 52.0203
Prior assignment from Office of Institutional Research is required.

Proposed Name
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

[] For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE
http://www.arkansashighered.com/pdfs/BookAppNewProgramCriteriaandProceduresRevised2005.pdf.

[] Program proposal uses courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here:

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Code/Name Effective Catalog Year
No new students admitted to program after Term: Year:
Allow students in program to complete under this program until Term: Year:

SECTION V: Proposed Changes to an Existing Program or Program Policies

Insert here a statement of the exact changes to be made: The Transportation and Logistics major requires 6 hours of courses from a single collateral. The Information Systems department recently revised their curriculum leaving the information

systems collateral in transportation and logistics with only a single course. After consultation with the Information Systems department the Marketing & Logistics department proposes adding four additional ISYS courses to those acceptable to fulfill the information systems collateral requirement and retitle the remaining course to be consistent with Information Systems Department curriculum change. In addition, after consultation with the Economics Department, ECON 4653 is being deleted and replaced with ECON 3853, Emerging Markets.

Check if either of these boxes apply and provide the necessary signature:

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- Change in Program Policies

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

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- State complete major/program name
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For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

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Total Degree Requirements	126

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____

DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
 Initials _____ Date _____

Distribution

Notification to:
 (1) College (2) Department (3) Admissions (4) Institutional Research (5) Continuing Education (6) Graduate School
 (7) Treasurer (8) Undergraduate Program Committee

University Course and Programs Committee
23-Jul-10

UNDERGRADUATE PROGRAM CHANGES

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Department of Marketing and Logistics

TRNSBS - BSBA, Transportation - Attachment 2B

Proposal requests to delete ECON 4653 and replace it with ECON 3853; add four ISYS courses to those acceptable to fulfill the information systems collateral requirement and rename the remaining courses to be consistent with Information Systems Department curriculum change as specified in Section V of Attachment 2B.

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Undergraduate Interdisciplinary Programs

SUST-M - Foundations of Sustainability Minor - Attachments 3A and 3B

Proposal requests to add a new minor as specified in Section VII of Attachment 3A. Three new course proposals are also attached to the program change form. Additional information is contained in the Letter of Notification - Attachment 3B.

ATTACHMENT 3A

Academic Policy Series

1622.20A

ADD, CHANGE OR DELETE UNIT, PROGRAM REQUIREMENTS, OR ACADEMIC POLICIES
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SECTION I: Approvals

Approval table with fields for Department / Program Chair, Date Submitted, Graduate Council Chair, Date, College Dean, Date, Faculty Senate Chair, Date, Honors College Dean, Date, Provost, Date, Core Curriculum Committee, Date, Board of Trustees Approval/Notification Date, University Course and Programs Committee, Date, Arkansas Higher Education Coordinating Board Approval/Notification Date.

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: [] Major/Field of Study [x] Minor [] Other Unit [] Policy
Level: [x] Undergraduate [] Graduate [] Law Effective Catalog Year 2012

Program changes are effective with the next available catalog. See Academic Policy Series 1622.20

Current Name ?

College, School, Division ?

Department Code SUST ?

Current Code (6 digit Alpha) ?

Proposed Code (6 digit Alpha) ?
Prior approval from the Office of the Registrar is required.

[x] Interdisciplinary Program

CIP Code ?
Prior assignment from Office of Institutional Research is required.

Proposed Name FOUNDATIONS OF SUSTAINABILITY MINOR
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

[x] For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE
http://www.adhe.edu/divisions/academicaffairs/Pages/academicaffairs.aspx

[x] Program proposal uses courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: See Attached Letters from Academic Deans

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____
No new students admitted to program after Term: ___ Year: _____
Allow students in program to complete under this program until Term: ___ Year: _____

SECTION V: Proposed Changes to an Existing Program or Program Policies

Insert here a statement of the exact changes to be made: _____
Check if either of these boxes apply and provide the necessary signature:
[] Program change proposal adds courses offered by another academic college, and that college dean's office has been

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Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
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- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change in Program Policies

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

SECTION VII: Catalog Text and Format

In the box below, insert the current catalog text which is to be changed, with changes highlighted with the color yellow. Include all proposed changes identified in Section V. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate. If you are proposing a new program, give proposed text with all of the elements listed below. If you are proposing modified text, include these elements as appropriate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
Foundations of Sustainability
- Briefly define or describe the major/program or discipline.
The 'Foundations of Sustainability' minor is conceived as an outstanding undergraduate curriculum that will provide students with foundational knowledge of sustainability as well as hands-on, inquiry based investigations of a broad spectrum of topics in sustainability and introduce them to analytical skills useful to the solution of societal issues related to sustainability. Students will be challenged and enabled to address significant problems in sustainability through a requirement to engage in service learning, research learning, or internship experiences focused on various aspects of sustainability.

The 'Foundations of Sustainability' minor is intended to be interdisciplinary, drawing from faculty and coursework across all colleges of the university. 'Foundations of Sustainability' is also intended to be accessible to all undergraduate students, regardless of degree program. As such, it represents a new model for interdisciplinary study in higher education. The proposed minor is intended to be developed leveraging existing faculty expertise and courses at the University of Arkansas main campus in Fayetteville.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
Current student or new admission in good standing
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
Student must complete a major at other college, school or department program within the University of Arkansas
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
2 core gateway courses – 3 credit hours each, 1 required capstone course – 3 credit hours, and three electives – with a total of 9 credit hours (See schedule next page)
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.)
Capstone experience composed of thesis, service learning, internship or research
- Identify name and requirements for each concentration (if any)
N/A

- Specify whether a minor or other program component is allowed or required and provide details.
Student must be enrolled in a discipline as major
- State eight-semester plan requirements
Spring Semester – SUST 1103 – 3 CH
Fall Semester - SUST 2103 – 3 CH
Spring Semester - ELECTIVE (3 to 6 CH)
Fall Semester - ELECTIVE (3 to 6 CH)
Spring or Fall CAPSTONE EXPERIENCE (3 CH)

For minors, state requirements in terms of hours, required courses, electives, etc.

Required Courses for Foundations of Sustainability Minor – U. of Arkansas Fayetteville

Credit Hours	Courses
3	SUST 1103 Foundations of Sustainability (See Attached Syllabus)
3	SUST 2103 Applications of Sustainability (See Attached Syllabus)
9	Elective courses with sustainability focus selected from a broad menu of offerings in 4 thematic areas (Refer to attached Letter of Notification for full list of elective courses): Sustainability of Natural Systems Sustainability of Managed Systems (Agriculture & Business) Sustainability of Built Systems (Architecture & Engineering) Sustainability of Human Social Systems

Elective courses are categorized as Tier 1 (courses with dominant sustainability content or fundamental principles related to understanding sustainability) and Tier 2 (courses with subordinate sustainability content or fundamental principles related to understanding sustainability, but useful in preparing students with pre-requisite knowledge for Tier 1 courses). Students in Foundations of Sustainability minor must complete at least 6 hours of their 9 hour electives in Tier 1 courses. Complete lists of Tier 1 and Tier 2 courses by thematic areas are presented below in section 16

3	SUST 4103 Capstone Project in Sustainability or substitute approved by UA Sustainability Curriculum Steering Committee to serve as capstone experience for the Foundations in Sustainability minor (See Attached Syllabus)
---	--

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

N/A

For Law School program/units, prepare text consistent with current catalog style.

N/A

For centers, prepare text consistent with current catalog style.

N/A

SECTION VIII: Action Recorded by Registrar's Office

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APPENDIX I: Proposed Syllabus for SUST 1103 Foundations of Sustainability

**University of Arkansas
Undergraduate Sustainability Minor**

Syllabus

SUST 1103 Foundations of Sustainability

Faculty

Multi-disciplinary team from ARSC, ARCH, AFLS, ENGR, COEHP, WCOB and LAW faculty

Social Systems	Prof. Kevin Fitzpatrick
Natural Systems	Prof. Steve Boss
Built Systems	Prof. Tahar Messadi
Managed Systems	Prof. Jennie Pop

Supporting faculty- Carol Gattis, Jon Johnson, Marty Matlock, Kim La Scola Needy, Harrison Pittman and Gregory Benton

Room TBD

Prerequisites NONE

Term SPRING 2011

Purpose and Goals

Foundations of Sustainability is an interdisciplinary course designed to introduce undergraduate students to basic concepts and theories of sustainability at global, regional and local levels. The course is organized around four major thematic areas of sustainability: social systems, natural systems, managed systems and built systems.

The aim of this course is to increase the environmental literacy of students and pave the way for both the creative and persistent engagement of sustainability concerns into the students' own disciplines.

Social Systems

A brief overview concerning who, what, how, and why behind specific social behaviors and dynamics leading to the global environmental crisis will be examined. Theories of social justice and equity are reviewed with a focus on how to improve sustainability for future outcomes. This section will also look at the relationship between social inequality (resource allocation) and sustainability. This uneven distribution of resources impacts certain subgroups more than others; particular attention will be paid to discussing the effects of unequal resource distribution on the poor, indigenous, racial/ethnic minorities, women, and the place-bound in both urban and rural areas.

Natural Systems

Natural Systems provides a modern contextual view of Earth as a closed system with respect to matter and develops concepts of material transfers among various components of the Earth System (atmosphere, hydrosphere, geosphere, biosphere). Emphasis is on developing fundamental understanding of systems science, material transfers and mass balance as a means of understanding complex Earth processes. Introduction to the importance of quantitative measures to document environmental change as well as progress toward or retreat from sustainability will be provided. Interconnectedness of Earth processes and implications of interactions among Earth systems will also be discussed.

Built Systems

Design and construction of buildings with related infrastructure have an adverse effect on the preservation of natural resources and quality of the environment. In this part of the course, we address the sustainable theories and concepts in the context of the built world, with the promise they hold in shaping a better environment, and in changing our views on human-nature relations. Three broad topics will be addressed in the following sequence: regional planning and land use considerations, site-landscape planning and ecological design and production of buildings.

Managed Systems

Managed Systems address foundations of life cycle analysis, agricultural production-distribution mechanisms, customer good production, business, law and policy. The evolution of agricultural systems and the foundations of agricultural practices for meeting sustainability objectives will be examined. Business foundations for sustainability will be covered, including ethics, the role of consumer preferences and the optimization of sustainability objectives throughout the supply chain. A policy implementation approach will provide an exploration of the pertinent US legal system, the roles of international law and the World Trade Organization, and the foundations of environmental law.

Required Texts and Supporting Materials

Texts, supplemental reading and instructional materials will be derived from a combination of chapters from published textbooks, publicly available government and United Nations reports or monographs, sustainability content in the public domain from Internet resources or government agencies, government research laboratories, and non-governmental organizations (NGO's). Additional materials will be developed as needed.

Reaction Papers and Reading Assignments

TBD

Exams

See Tentative Schedule

Grading

TBD

Course Policy

TBD

Course Website

TBD

Teaching Assistants

TBD

CALENDAR

WEEK	DAY	TOPIC
SOCIAL SYSTEMS		
WEEK 1	19-Jan	Course Overview: Content, Expectations, Assessment Method, Exams Overview of the Social Systems Perspective <ul style="list-style-type: none"> Theories of social behavior Cultural systems approach (values & attitudes) Demographic change; past, present, and future
WEEK 2	24-Jan	Environmental Change and Well-Being <ul style="list-style-type: none"> Global health Built and social environment effects on health Improving health with sustainable practices
WEEK 3	31-Jan	Social Justice, Inequality, and Sustainability <ul style="list-style-type: none"> Theories of inequality Subgroup differences in resource access Social and environmental justice movements
NATURAL SYSTEMS		
WEEK 4	7-Feb	Exam #1 Fundamental Tools of Sustainability Measurement <ul style="list-style-type: none"> Scientific notation and dimensional analysis Exponential functions and exponential growth
WEEK 5	14-Feb	Scale and Scaling in Natural Systems <ul style="list-style-type: none"> Measurement vs. estimation
WEEK 6	21-Feb	Sustainable Systems Thinking: What Are Earth Systems? <ul style="list-style-type: none"> The atmosphere, hydrosphere, biosphere and geosphere Positive and negative feedback in the Earth systems Sources, sinks and material balance on planetary scale

WEEK 7	28-Feb	Fluxes and Steady State of the Earth System <ul style="list-style-type: none"> • Understanding Earth as an integrated system • Ecology as a system • Case studies and discussion • Overarching Review
		BUILT SYSTEMS
WEEK 8	7-Mar	Exam #2 Sustainable Development of the Built Environment <ul style="list-style-type: none"> • Environmental problems connected to the built infrastructure • Key drivers for sustainable urban-city planning, land use and smart growth • Strategies for sustainable community development (livable communities)
WEEK 9	14-Mar	Theories of Sustainable Site-Landscape <ul style="list-style-type: none"> • Site-landscape as habitat - for human and non-human communities • Site-landscape as a system of low embodied energy, waste and pollution • Site-landscape and water - managing the quantity and quality of stormwater (LID)
WEEK 10	21-Mar	SPRING BREAK
WEEK 11	28-Mar	Principles of Designing Sustainably <ul style="list-style-type: none"> • Hydrologic systems in and around buildings • Place based energy, natural resources and materials utilization • Environmental quality in built structures
WEEK 12	4-Apr	Case Studies of Built Environment and Discussion Overarching review and assessment of sustainability content delivered in this course
		MANAGED SYSTEMS
WEEK 13	11-Apr	Exam #3 Sustainability Metrics in Managed Systems <ul style="list-style-type: none"> • Overview of life cycle assessment and life cycle inventory • Basic stages of conducting a life cycle assessment • Interpreting results, limitations of analysis and making recommendations

WEEK 14	18-Apr	Foundations of Agricultural Systems <ul style="list-style-type: none"> • Evolution of agricultural systems • Foundations of crop, livestock, forestry and specialty crop production • Systems integration for sustainability • Agricultural practices for meeting sustainability objectives
WEEK 15	25-Apr	Business Foundations for Sustainability <ul style="list-style-type: none"> • Ethics in business • Environmental externalities in business decisions across the supply chain • Optimization of sustainability objectives in business
WEEK 16	2-May	Policy Implementation for Sustainability <ul style="list-style-type: none"> • Overview of US legal system pertinent to agriculture and sustainability • Role of international law and the World Trade Organization • Foundations of environmental law

	6-May	DEAD DAY
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	TBD	FINAL EXAM
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APPENDIX II: Proposed Syllabus for SUST 2103 Application of Sustainability

University of Arkansas Undergraduate Sustainability Minor

SUST 2103 Application of Sustainability Syllabus

Faculty

Multi-disciplinary team from ARSC, ARCH, AFLS, ENGR, COEHP, WCOB and LAW faculty

Social Systems	Prof. Kevin Fitzpatrick
Natural Systems	Prof. Steve Boss
Built Systems	Prof. Tahar Messadi
Managed Systems	Prof. Jennie Pop

Supporting faculty- Carol Gattis, Jon Johnson, Marty Matlock, Kim La Scola Needy, Harrison Pittman and Greg Benton

Prerequisites	SUST 1103
Term	FALL 2011

Purpose and Goals

Building on the content developed in SUST 1103, this multidisciplinary course is designed to introduce students to practical applications of sustainability from multiple perspectives. Bringing together thematic domains of knowledge, i.e., the natural, managed, built and social systems, this course will be taught by University of Arkansas faculty and outside experts to provide a wide range of interest and experience focusing on sustainable development.

A meaningful comprehension of sustainability necessitates a blend of multidisciplinary and specialized learning. In this second course, students, campus-wide, will be exposed to concepts and practices that go beyond the confines of their discipline.

Ultimately, this course will help students identify a particular area of interest they wish to focus upon in their minor of sustainability studies.

Social Systems

In this course, Social Systems studies will focus on three primary areas. The first content area explores the human and social behaviors that have helped create this global ecological crisis. Who is responsible and what can we do to change the outcome will be explored. The second content area examines the relationship between the ecological dynamics and global change and its impact on human health and well-being. The final area explores the uneven distribution of resources around the world and how this global ecological crisis has unfairly impacted the poor, indigenous, racial/ethnic minorities, women, and the place-bound in both urban and rural areas. Environmental/social justice issues continue to be an important part of the sustainability story.

Natural Systems

Principles of natural systems learned in Foundations of Sustainability (SUST 1103) will be incorporated to understand the global carbon cycle. Students will learn about measurement and assessment of greenhouse gases as a component of the global carbon cycle. They will also study the biosphere as a global carbon cycle component, and discuss services rendered to humanity by world ecosystems. In addition, the impact of civilization on the functioning of ecosystems and the global carbon cycle will be explored.

Built Systems

The Built Systems will be focused on the range of methods, techniques, and strategies pertaining to the evaluation and design of a sustainable built environment. Students are challenged to advance creative development scenarios for smart growth of the built environment at the regional, urban and local level. They will understand the advantages of place-based resource conservation, low impact development, livable communities, smart growth and sustainable land management in the planning of cities, buildings and landscapes.

Managed Systems

The managed systems unit will explore how agriculture and business engage and respond to sustainability initiatives throughout the supply chain. The first half of this segment is devoted to a discussion of the competing definitions of sustainability adopted in agriculture and the major efforts within the agricultural community to identify and measure environmental, economic and social sustainability metrics. The remainder of the unit examines issues in enforcement of sustainability and challenges to balancing the goals of sustainability throughout the agricultural and consumer good supply chains.

Project Assignment

In general, the method of *participatory action research* should guide the inquiry. Rather than define the concept of sustainability in just purely linguistic terms, students will work in teams to address the problem and propose a strategy for solving it in social, environmental, business, legal, spatial and economic terms. All assigned work shall be documented via a portfolio to be presented at the end of the semester.

A semester long project will be assigned by end of the first week, and the formation of the research teams will be facilitated by the teaching assistants. The research project will be conducted by multidisciplinary teams of 4-5 students. No team should have more than two members from a single discipline.

Research will be focused on understanding real problems and proposing real solutions in a sustainable fashion. This final project will be filtered through the ethical, environmental, legal, business-economic, and social implications. The faculty will explain the specifics of the project, and define all the benchmarks to be attained. The project description and specifics remain to be developed.

Required Texts and Supporting Materials

Texts, supplemental reading and instructional materials will be derived from a combination of chapters from published textbooks, publicly available government and United Nations reports or monographs, sustainability content in the public domain from Internet resources or government agencies, government research laboratories, and non-governmental organizations (NGO's). Additional materials will be developed as needed by participating course faculty.

Reaction Papers and Reading Assignments	TBD
Grading	TBD
Course Policy	TBD
Course Website	TBD
Teaching Assistants	TBD
Student Performance Evaluation	

Final course grades will be based upon:

Attendance and Individual class participation	20%
Individual writing assignments	20%
Team research project	50%
Final Presentation	10%

Individual grades for team research will be determined by instructor observation and peer evaluation.

CALENDAR

WEEK	DAY	TOPIC
SOCIAL SYSTEMS		
Week 1	22-Aug	How Did We Get Here? <ul style="list-style-type: none"> Understanding the human processes behind ecological degradation Behavior, attitudes, and norms: Changing the way we think and act Student assessments of their ecological footprint and sustainability profile
Week 2	29-Aug	Environmental Change and its Impact on Health and Well Being <ul style="list-style-type: none"> Understanding resource depletion and its impact on human health Physical and mental health consequences of ecological degradation Student assessment of health risks in their current environments
Week 3	5-Sep	Social/Environmental Justice <ul style="list-style-type: none"> Social, political, psychological and cultural consequences of uneven resource distribution Moral and ethical issues for a sustainable environment Student assessment of sustainable social justice indicators in NWA
NATURAL SYSTEMS		
WEEK 4	12-Sep	The Global Carbon Cycle <ul style="list-style-type: none"> Data sources on the global carbon cycle Climate forcing from carbon dioxide Examination of theoretical versus empirical global warming

WEEK 5	19-Sep	Greenhouse Gas Emissions <ul style="list-style-type: none"> • Types of greenhouse gases • Data on greenhouse gas emissions • Comparison of greenhouse gas emissions to atmospheric greenhouse gas concentrations
WEEK 6	26-Sep	Biodiversity <ul style="list-style-type: none"> • Long-term trends in biodiversity - data • Current trends in biodiversity - data • Understanding biodiversity from a systems perspective
WEEK 7	3-Oct	Ecosystem Services <ul style="list-style-type: none"> • What are ecosystem services (inventorying the breadth of services) • Why ecosystem services are important • Valuation of ecosystem services <p>BUILT SYSTEMS</p>
WEEK 8	10-Oct	Regional-Urban Sustainable Development Indicators, Tools and Strategies <ul style="list-style-type: none"> • Sustainable development metrics • Land use, smart growth and low impact development in city planning • Assessment at multiple scales of a regional-urban project development
WEEK 9	17-Oct	Methods and Tools for Building Assessment <ul style="list-style-type: none"> • Understand the concept of building assessment • Building assessment standards such as LEED, Green Globes, Energy Star and others • Field comparison between a traditional and a sustainable building
WEEK 10	24-Oct	Planning of Sustainable Sites-Landscapes <ul style="list-style-type: none"> • Analysis of ecological applications to a site-landscape • Analysis of low impact development in a particular site-landscape • Visit & assessment on sustainable credentials of a local housing development
WEEK 11	31-Oct	Case Studies of Built Environment and Discussion Overarching review and assessment of sustainability content in this course

MANAGED SYSTEMS		
WEEK 12	7-Nov	Defining Sustainability for Agriculture and Business <ul style="list-style-type: none"> • Critical analysis of the competing definitions of sustainability for agriculture and business • Survey and assessment of approaches to sustainable agriculture
WEEK 13	14-Nov	Role of Agriculture and Business in Defining Sustainability <ul style="list-style-type: none"> • Consumer awareness of sustainability • Decision making across supply chains • Efforts to set the sustainability definition • Science, international laws and economic factors: A reality check
WEEK 14	21-Nov	Applications of Sustainability Initiatives Across Agriculture and Business <ul style="list-style-type: none"> • Recent life cycle assessment of the dairy industry • Carbon sequestration, carbon credits and climate change
WEEK 15	28-Nov	Enforcing Sustainability Throughout the Supply Chain <ul style="list-style-type: none"> • Retailer led efforts to create sustainability metrics for business to business transactions • The advantages and disadvantages of certification based decision metrics • Implications enforcement of the Clean Water Act • Case study: OK vs. AR lawsuit over water quality in the Illinois River
WEEK 16	5-Dec	Critical Review of Sustainability Themes Across Agriculture and Business <ul style="list-style-type: none"> • Important agricultural production, business, consumer and legal issues • Addressing the sustainability components through agriculture • Potential challenges and opportunities for agriculture in reaching sustainability goals
	8-Dec	DEAD DAY
	TBD	FINAL REVIEW

Note- Schedule will be adjusted to include Fall Break

APPENDIX III: Proposed Policies & Procedures for SUST 4103 Capstone Project in Sustainability

University of Arkansas Undergraduate Sustainability Minor

SUST 4103 - Capstone Project in Sustainability Syllabus

Faculty

Multi-disciplinary team from ARSC, ARCH, AFLS, ENGR, COEHP, WCOB and LAW faculty

Teaching Assistant: TBD

Pre-requisites: SUST 1103, SUST 2103, 6 hours of electives in Foundations of Sustainability minor, senior standing or permission of instructor

Term: Spring, Fall, Summer

Time and Place: TBD

CH: 3 Hours

COURSE DESCRIPTION

SUST 4103, CAPSTONE PROJECT IN SUSTAINABILITY, provides students with practical experience focused on service, internship and/or research learning in sustainability. Engagement in community service, work on specific research projects, or other activities related to sustainability offers opportunities for students to integrate as well as synthesize theories and principles learned from prior coursework toward the praxis of sustainability. SUST 4103 is a requirement for students to satisfy the capstone element of the Foundations in Sustainability minor. Students may formally petition the University of Arkansas Sustainability Curriculum Steering Committee (UA SCSC) to substitute sustainability-oriented senior design projects, Honors College research projects, other service learning courses, or equivalent internship experiences for SUST 4103 to satisfy the capstone element of Foundations in Sustainability minor.

Service Learning

Service learning brings together community service and focused academic learning development. The student will perform community service in the field while meeting with their advisor to discuss, assess and reflect on their experience in response to a specific, well-defined learning framework. Service learning offers the opportunity to critically address a wide range of theoretical frameworks presented in class.

Internship Learning

Internship learning is a work-integrated learning program. Through field-based experience, students have the opportunity to strengthen their qualifications and gain a valuable learning experience about sustainability. Internships are to be jointly supervised by a faculty member and a qualified on-site supervisor who will give structure and parameters to the field experience for specific learning outcomes.

Research Learning

Research learning is work that is developed by the student with direction from a faculty member that enables a student to develop an approach for learning about a particular issue of sustainability. Students may choose to conduct work that is purely literature based or the result of field experiments, surveys, observations, and a variety of acceptable standard research protocols. If necessary, students will be required to obtain IRB approval of their project if their work addresses sustainability issues under the human and animal subject parameters.

COURSE ORGANIZATION

Seminar – 3 Weeks of the Semester

This seminar, planned to meet twice for each of the first three weeks of the semester, is designed to help students specifically propose, organize, and plan their internships, service learning opportunities, or integrative research projects. Students will have an opportunity to better understand the purpose behind service/research learning, while at the same time developing a proposal for their project. Faculty will articulate the precise requirements and standards for the project, expectations for the timing and completion of the project, and acceptable methods for reporting the findings and presenting the final product.

Capstone Experience – 10 Weeks of the Semester

For the remainder of the semester, students will be involved in their own individually or team designed service/research projects. Each project must be approved by the UA Sustainability Curriculum Steering Committee and the student's faculty-advisor. Students will need to maintain a daily journal of their work and be cognizant of their overall project design and the collection of information throughout this experience. Each student will need to report on the significance of their project as it relates to the four thematic areas defined in the Foundations of Sustainability minor. The modalities to help the program administration, the steering committee and faculty-advisors guide and approve the student's selection of the capstone project will be established.

Capstone Project Presentation

Each student will make a presentation at the end of his or her capstone experience. While the steering committee will make some accommodation for students in both spring and summer semesters, a final presentation in the form of a poster session will be developed in which all students are expected to participate. The details of the presentations and the requirements for students will be discussed in the first three weeks of the semester.

Standards and Minimum Criteria for the Capstone Project

Comprehensive reviews of potential capstone projects will be undertaken to develop protocols that will assist (steering committee, faculty-advisors and students) all participants in determining the viability of any capstone project. Protocols will be developed for each venue: service learning, internship learning and research learning, and will outline the minimum requirements to be fulfilled by each student in the pursuit of the capstone project.

E-Portfolio + Capstone Project Submission

A final report of the capstone project shall be included in the student's e-Portfolio. These portfolios will contain a chronology of the student's experience since enrolling in the Sustainability minor. In addition, the e-portfolio will be important to helping coordinate the last step towards the fulfillment of the Minor requirements, such as deadline of submission, presentation, grading, etc.

READING: TBD

GRADING AND ATTENDANCE: TBD

CALENDAR

WEEK	DAY	TOPICS - (MORE DEVELOPMENT IS UNDERWAY)
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SEMINAR

WEEK 1	19-Jan	Orientation, What is Service Learning, Internship Learning, Research Learning?
	21-Jan	Orientation, What is Service Learning, Internship Learning, Research Learning?
WEEK 2	24-Jan	Expectations - What Am I Supposed To Do?
	25-Jan	Expectations - What Am I Supposed To Do?
WEEK 3	31-Jan	Case Study Presentations of Pertinent Projects
	4-Feb	Case Study Presentations of Pertinent Projects

INTERNSHIP, SERVICE LEARNING or RESEARCH CAPSTONE PROJECT DEVELOPMENT

Student works under the supervision of an advisor

WEEK 4	7-Feb	MEETINGS SCHEDULE DETERMINED BETWEEN ADVISOR AND STUDENT	NOTE: SOME STUDENTS MAY CONDUCT CAPSTONE PROJECT DURING SUMMER TERM
WEEK 5	14-Feb		
WEEK 6	21-Feb		
WEEK 7	28-Feb		
WEEK 8	7-Mar		
WEEK 9	14-Mar		

WEEK 10	21-Mar	SPRING BREAK
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WEEK 11	28-Mar	MEETINGS SCHEDULE DETERMINED BETWEEN STUDENT AND ADVISOR	NOTE: IBID
WEEK 12	4-Apr		
WEEK 13	11-Apr		
WEEK 14	18-Apr		

FINAL REVIEW OF CAPSTONE PROJECT

WEEK 15	25-Apr	PRESENTATION OF CAPSTONE PROJECT	NOTE - PRESENTATIONS MAY BE HELD AT SUMMER END
	28-Apr	PRESENTATION OF CAPSTONE PROJECT	
WEEK 16	2-May	PRESENTATION OF CAPSTONE PROJECT	
	4-May	PRESENTATION OF CAPSTONE PROJECT	

ATTACHMENT 3B

A PROPOSED UNDERGRADUATE MINOR IN

FOUNDATIONS OF SUSTAINABILITY

AT

THE UNIVERSITY OF ARKANSAS – FAYETTEVILLE

Presented to

Dr. Sharon Gaber
Provost and Vice-Chancellor for Academic Affairs

By the

University of Arkansas
Sustainability Curriculum Steering Committee:

Stephen K. Boss, Chair
J. William Fulbright College of Arts & Sciences

Tahar Messadi, Co-chair
E. Fay Jones School of Architecture

Gregory Benton, Co-chair
College of Education and Health Professions

Kevin Fitzgerald, Co-chair
J. William Fulbright College of Arts & Science

Carol Gattis, Co-chair
University of Arkansas Honors College

Betsy Howlett, Co-chair
Jon Johnson, Co-chair
Sam Walton College of Business

Kim LaScola-Needy, Co-chair
Marty Matlock, Co-chair
College of Engineering

Harrison Pittman, Co-chair
University of Arkansas Law School

Jennie H. Popp, Co-chair
Dale Bumpers College of Agriculture, Food, and Life Sciences

Mattie M. Bookhout, Co-chair
William J. Fleming, Co-chair
University of Arkansas Associated Student Government

LETTER OF NOTIFICATION

NEW MINOR

(Maximum 18 semester credit hours of new theory courses and 6 credit hours of new practicum courses)

1. Institution submitting request: University of Arkansas - Fayetteville
2. Contact person/title: Dr. Sharon Gaber, Provost and Vice-Chancellor for Academic Affairs
3. Phone number/e-mail address: 479-575-5459, sgaber@uark.edu
4. Proposed effective date: 1 January 2011
5. Title of degree program: Not Applicable
6. CIP Code: 03.0101, Natural Resources/Conservation, General
7. Degree Code: Not Applicable
8. Proposed option/concentration/emphasis name: Undergraduate Minor in Foundations of Sustainability
9. Reason for proposed action:

In February 2007, UAF was among the first 100 signatories to the American College and University Presidents Climate Commitment. Among the commitments to which UAF pledged was a promise to develop undergraduate curricula with emphasis on sustainability. In addition, UAF administration, faculty, staff, and students have expressed interest in offering sustainability curricula at the institution. Development of this curriculum will maintain UAF leadership in higher education within Arkansas and will attract the next generation of students to our campus.

10. New option/concentration/emphasis objective:

During the last decade, emerging knowledge confirmed widespread degradation of global environmental quality and habitats consequent to activities necessary to accommodate burgeoning human population on Earth. In response to growing concerns regarding the ability of humanity to perpetuate civilization over the long-term, many members of the academy increased efforts to bring various global crises to public attention. The result was a resurgence in thought regarding 'sustainability' and emergence of a widespread movement among academicians to raise awareness of the tenuous environmental situation for the general public as well as constituents at their academic institutions. Recent events surrounding the blowout of the Deepwater Horizon oil well in the Gulf of Mexico dramatically illustrate the "Tragedy of the Commons" and the interdependence of human societies and economies on ecological services and natural resources. Thus, it is time to enhance the educational experience of undergraduate students through focused study on Foundations of Sustainability.

At the University of Arkansas, a number of undergraduate and graduate programs already have significant components of sustainability theory and practice (e.g. degree programs in Crops, Soils, and Environmental Sciences, Biological Sciences, Geosciences). However, these degree programs do not offer specialized instruction or primary degrees in 'sustainability' *per se*. The proposed minor is intended to be developed leveraging existing faculty expertise and courses at the University of Arkansas main campus in Fayetteville.

The 'Foundations of Sustainability' minor is intended to be interdisciplinary, drawing from faculty and coursework across all colleges of the university. 'Foundations of Sustainability' is also intended to be accessible to all undergraduate students, regardless of degree program. As such, it represents a new model for interdisciplinary study in higher education.

11. Provide the following:

a. Curriculum outline - List of required courses

Required Courses for Foundations of Sustainability Minor – U. of Arkansas Fayetteville

Hours	Courses
3	SUST 1103 Foundations of Sustainability
3	SUST 2103 Applications of Sustainability
9	Elective courses with sustainability focus selected from a broad menu of offerings in 4 thematic areas (See Item 16 below):
	Sustainability of Natural Systems
	Sustainability of Managed Systems (Agriculture & Business)
	Sustainability of Built Systems (Architecture & Engineering)
	Sustainability of Human Social Systems

Elective courses are categorized as Tier 1 (courses with dominant sustainability content or fundamental principles related to understanding sustainability) and Tier 2 (courses with subordinate sustainability content or fundamental principles related to understanding sustainability, but useful in preparing students with pre-requisite knowledge for Tier 1 courses). Students in Foundations of Sustainability minor must complete at least 6 hours of their 9 hour electives in Tier 1 courses. Complete lists of Tier 1 and Tier 2 courses by thematic areas are presented below in section 16

- | | |
|---|---|
| 3 | SUST 4103 Capstone Project in Sustainability or substitute approved by UA Sustainability Curriculum Steering Committee to serve as capstone experience for the Foundations in Sustainability minor. |
|---|---|

b. New course descriptions

SUST 1103 Foundations of Sustainability: Course provides an overview of the foundational principles of sustainability beginning with discussion of widely accepted definitions of sustainability and governing principles for understanding the three pillars of sustainability (Ecology/Environment, Economics, and Equity). Also serves to introduce students to the structure and meaning of thematic areas (sustainability of natural systems, sustainability of managed systems, sustainability of built systems, and sustainability of human social systems) for the Foundations of Sustainability minor. Required gateway course for all students in the Foundations of Sustainability minor. No pre-requisites. 3 hours

SUST 2103 Application of Sustainability: Course builds on knowledge gained in SUST 1103 by introducing students to data gathering, data analysis with interpretation and synthesis of data applied to problems in sustainability. The course provides students with opportunities for hands-on, inquiry-based investigation of sustainability issues across four thematic areas (sustainability of natural systems, sustainability of managed systems, sustainability of built systems, and sustainability of human social systems). Group or individual projects are completed within each course module. Required gateway course for all students in the Foundations of Sustainability minor. Pre-requisite: SUST 1103. 3 hours

SUST 4103 Capstone Project in Sustainability: A capstone experience focused on service learning, research learning, or internship in sustainability required for students enrolled in Foundations of Sustainability minor. Student engagement in community service, research, or relevant work on sustainability through a summer internship or equivalent experiences provides

opportunities for students to apply sustainability theories and principles learned from prior coursework toward advancing sustainability across society. SUST 4103 is the preferred requirement for students to satisfy the capstone element of Foundations in Sustainability minor. Pre-requisites: SUST 1103, SUST 2103, 6 hours of elective coursework in Foundations of Sustainability minor and senior standing or permission of the professor(s). 3 hours.

c. Program goals and objectives

The goal of the minor in Foundations of Sustainability is to help position the University of Arkansas - Fayetteville for national leadership in sustainability. This goal will be achieved through development of an outstanding undergraduate curriculum that will provide students with foundational knowledge of sustainability as well as hands-on, inquiry based investigations of a broad spectrum of topics in sustainability and introduce them to analytical skills useful to the solution of societal issues related to sustainability. Students will be challenged and enabled to address significant problems in sustainability through a requirement to engage in service learning, research learning, or internship experiences focused on various aspects of sustainability.

d. Expected student learning outcomes

Students who complete the minor in Foundations of Sustainability will be expected to:

1. articulate commonly accepted definitions of sustainability and discuss various nuances among those definitions;
2. have an understanding of the interdisciplinary nature of sustainability issues, particularly as the pertain to the thematic areas of knowledge addressed by the minor (sustainability of natural systems, sustainability of managed systems, sustainability of built systems, and sustainability of human social systems);
3. be conversant regarding acquisition and analysis of data pertinent to sustainability issues;
4. communicate orally, and in writing organized thoughts defining sustainability issues;
5. identify appropriate potential strategies to address sustainability issues using data and provide results of rudimentary analyses of data using novel metrics or statistics;
6. make recommendations, based on data analysis and interpretation, to advance sustainability of individuals or institutions.

12. Will the new option be offered via distance delivery? No

13. Mode of delivery to be used:

Standard college courses with in class, face-to-face meetings for enrolled students at the University of Arkansas - Fayetteville

14. Explain in detail the distance delivery procedures to be used: Not Applicable

15. Is the degree approved for distance delivery? No

16. List courses in option/concentration/emphasis. Include course descriptions for new courses.

New Courses:

SUST 1103 Foundations of Sustainability. Course provides an overview of the foundational principles of sustainability beginning with discussion of widely accepted definitions of sustainability and governing principles for understanding the three pillars of sustainability (Ecology/Environment, Economics, and Equity). This course also serves to introduce students to the structure and meaning of thematic areas (sustainability of natural systems, sustainability of managed systems, sustainability of built systems, and sustainability of human social systems) for the Foundations of Sustainability minor. Required gateway course for all students in the Foundations of Sustainability minor. No pre-requisites. 3 hours

SUST 2103 Application of Sustainability: Course builds on knowledge gained in SUST 1103 by introducing students to data gathering, data analysis with interpretation and synthesis of data applied to problems in sustainability. The course provides students with opportunities for hands-on, inquiry-based investigation of sustainability issues across four thematic areas (sustainability of natural systems, sustainability of managed systems, sustainability of built systems, and sustainability of human social systems). Group or individual projects are completed within each course module. Required gateway course for all students in the Foundations of Sustainability minor. Pre-requisite: SUST 1103. 3 hours

SUST 4103 Capstone Project in Sustainability: a capstone experience focused on service learning, research learning, or internship in sustainability required for students enrolled in Foundations of Sustainability minor. Student engagement in community service, research, or relevant work on sustainability through a summer internship provides opportunities for students to apply sustainability theories and principles learned from prior coursework toward advancing sustainability across society. Students may formally petition the University of Arkansas Sustainability Curriculum Steering Committee (UA SCSC) to substitute sustainability-oriented senior design projects, Honors College research projects, other service learning courses, or equivalent internship experiences for SUST 4103 to satisfy the capstone element of Foundations in Sustainability minor. Pre-requisites: SUST 1103, SUST 2103, 6 hours of elective coursework in Foundations of Sustainability minor and senior standing or permission of professor(s). 3 hours.

List of Available Elective Courses (students choose 9 hours from menus below; at least 6 hours must be chosen from Tier 1 courses):

Sustainability of Natural Systems Courses

Tier 1

Course Number and Description	Prerequisites
BENG 4903 Watershed eco hydro	Prerequisite: CVEG 3213
BIOL 3861L Gen ecology lab	Co-req: BIOL 3863
BIOL 3863 Gen ecology	7 hrs of Bio Sciences
CSES 3214 Soil res & nutr cycle	CSES 2203 Corequisite: Lab component
ENSC 3003 Intro water sci	ENGL 1023 and ENSC 1003 or CHEM 1053 or higher or GEOL 1113 or higher or BIOL 1543
ENSC 3103 Pla & env restor	CSES 1203-Introduction to Plant Science or HORT 2003-Principles of Horticulture or BIOL 1613-Plant Biology
ENSC 3223/3221L Ecosys assess	BIOL 1543, CSES 2203, ENSC 3003 Corequisite: ENSC 3221L
ENSC 3263 Soil water conserv	CSES 2203
ENSC 4023 Water quality	CHEM 1123-University Chemistry II and CHEM 1121L-University Chemistry II Laboratory /Corequisite: Lab Component
ENSC 4263 Env soil sci	Prerequisite: CSES 3214

Tier 2

Course Number and Description	Prerequisites
BIOL 1543 Princ of biology	Corequisite: BIOL 1541L
CHEM 1103 Univ chem I	MATH 1203; Corequisite: Drill; Recommended Corequisite: CHEM 1101L
CHEM 1123 Univ chem II	Math 1203, Chem 1103. Corequisite: CHEM 1121L and
CSES 2203/2201L Soil sci	CHEM 1103 or CHEM 1074. (Same as ENSC 2203)
ENSC 1003 Env sci	None
GEOG 2003 World regional geog	None
GEOG 3333 Oceanography	Junior standing
GEOG 3383 Prin landscape evo	None
GEOG 4353 Elements of weather	Junior Standing
GEOG 4363 Climatology	GEOG 1003 and/or GEOG 4353.
GEOL 1113/1111L	Pre- or Corequisite: GEOL 1113.
GEOL 1133/1131L Env geol + lab lab	GEOL 1113, GEOL 1111L
GEOL 4033 Hydrogeology	MATH 2564, GEOL 3513, GEOL 3511L
GEOL 4053 Geomorphology	GEOL 1113 or GEOL 3002
GEOL 4063 Principles geochemistry	CHEM 1121L and CHEM 1123
GEOS 4413 Principles of remote sensing	University science course
MATH 4163/BIOL4163 Dyna models bio	MATH 2554. (Same as BIOL 4163)
PHYS 2054 Univ physics I	Math 2554; Corequisite: Lab component
PHYS 2074 University physics II	PHYS 2054, Prerequisite or corequisite: MATH 2564 Coreq: Lab component

Sustainability of Managed Systems courses**Tier 1**

Course Number and Description	Prerequisites
AGEC 3413 Prin of env econ	AGEC 1103 or ECON 2023
AGEC 3523 Envi and nat res law	None
AGED 4003 Issues in ag	Junior standing
CSES 3214 Soil resources & nutrient cycles	CSES 2203-Soil Science. Corequisite: Lab component
ENSC 3103 Plants & environ restoration	CSES 1203 or HORT 2003 or BIOL 1613.
ENSC 3223 Ecosystems assess	BIOL 1543, CSES 2203, and ENSC 3003, Corequisite: ENSC 3221L
ENSC 3263 Soil and water conservation	CSES 2203, Corequisite: Lab component

ENSC 4023 Water quality	CHEM 1123 and CHEM 1121L, Corequisite: Lab component
ENSC 4263 Env soil science	CSES 3214
HORT 3503 Sustain and organic hort	Suggested but not required: BIOL 1613 , CSES 1203, CSES 1003, or HORT 2003
WCOB 3023 Sustainability in Business	Junior standing

Tier 2

Course Number and Description	Prerequisites
AGED 4443 Methods of tech change	Junior standing
AGME 1613 Fund of ag syst tech	Corequisite: Lab Component
CSES 2012 Organic crop production	None
CSES 2203/2201L Soil science	CHEM 1103 or CHEM 1074. (Same as ENSC 2203), Drill component
ENSC 1003 Environmental science	None
MGMT 4243 Ethics & corp respons	Junior standing

Sustainability of Built Systems courses

Tier 1

Course Number and Description	Prerequisites
ARCH 4023 +H Sust & design	Permission of instructor
GEOG 4383 Hazard assess risk policy	Junior standing
INEG 4583 Ren. Energy: Green power sources	Senior standing
MEEG 4453 Ind waste & ene mgt	MEEG 4413 or equiv
MEEG 4473 Indoor env design	MEEG 4413 or equiv
LARC 40?? Sustainable housing	4th year standing
LARC 40?? Altern stormwat mgt	None

Tier 2

Course Number and Description	Prerequisites
GEOG 3543 Geog info sci	None
GEOG 4063 Urban geog	Junior standing
ARCH 2114 Bldg env tech pass systems bldgs	ARCH 1024 and ARCH 1222, Corequisite: ARCH 2016
ARCH3134 Bldg Systems light acoustic HVAC	ARCH 2124, Corequisite: ARCH 3016
LARC 4743 Site plan n-land arch	None

CVEG 3243 Env eng	MATH 3404 and CHEM 1123, Corequisite: Lab component
CVEG 4243 Env eng design	CVEG 3243
CVEG 4323 Design struct sys	CVEG 4303 & 4313
CSCE 4233 Low power digi sys	CSCE 2123

Sustainability of Human Social Systems courses

Tier 1

Course Number and Description	Prerequisites
AGEC 3523 Env and nat resource law	None
AGEC 4163 Ag and rural development	AGEC 1103 or ECON 2023
COMM 4643 Env Comm	None
ENGL 3903 Env. Lit. and Nature Writing	None
ENSC 3933/ PHIL 3113 Environmental ethics	ENSC 1003-Env Sci or PHIL 2003-Intro to Phil or PHIL 2103-Intro to Ethics
GEOS 4693 Env justice	None
RECR 1023/4023 Recr & nat res/otdr advn	RECR 1003 Foundations (4023 not in catalog)
RSOC 4603/ SOCI 4603 Env sociology	None

Tier 2

Course Number and Description	Prerequisites
ANTH 4143 Eco anthropology	None
HIST 4773 Env history	None
HLSC 6553 Env health	None
HLSC 4643/5643 Multicultural health	None
SCWK 4093 Hum beh & soc env I	PSYC 2003, SOCI 2013, SCWK 2133, and SCWK 3193 and (BIOL 1543 and BIOL 1541L, or ANTH 1013 and ANTH 1011L
SCWK 4103 Hum beh & soc env II	SCWK 4093 and SCWK 4153.
SCWK 3193 Hum diversity & soc wk	None
SOCI 2033 Soc probs	None
SOCI 3013 Population and Society	None
SOCI 3193 Race, class, gender U.S.	SOCI 2013
SOCI 4013 Special Topics: The City	SOCI 2013

Specify the amount of the additional costs required, the source of funds, and how funds will be used.

PROPOSED FUNDING SUBMITTED TO PROVOST

Personnel	Months	Rate	Amount
*Co-Director, Boss	1.125	6951	7820
*Co-Director, Messadi	1.125	8111	9125
**Admin. Spec. I	6	1500	9000
***Grad. Asst.	4.5	1333.33	6000
***Grad. Asst.	4.5	1333.33	6000
Total Salaries			30125

* Admin of UG minor/grad certificate program, co-chair steering cmte (note: should be 12.5% of a 9-month faculty sal.)

** Half-time; clerical, registrations, student records, recruiting (we will also request 1/2 time for graduate certificate to make this full-time position)

*** Assist with req'd courses + summer admin of service/research learning for capstone

Fringe Benefits	Salary	Percent	Amount
Co-Director	6951	0.247	1932
Co-Director	8111	0.247	2254
Admin. Spec. I	1500	0.247	2223
Grad. Asst.	1333.33	0.039	234
Grad. Asst.	1333.33	0.039	234

Total FB **6876**

Tuition Remission	Hours	Rate	Amount
Grad. Asst. 1	7.5	325	2438
Grad. Asst. 2	7.5	325	2438

Total TR **4875**

Program Maintenance&Evaluation **Amount**

Publications, recruitment materials, website design & maintenance 3000

Printing, office supplies, telephone service and program assessment 3000

Total PM&E **6000**

SUB - TOTAL **47876**

Faculty Support	Number of Faculty	Rate	Amount
*Faculty Release	4	4000	16000
**Steering Cmte	7	2000	14000

TOTAL FS **30000**

*In kind contribution from colleges

**Consider also making this travel award rather than salary?

TOTAL BUDGET **77876**

Budget Justification:

Co-Directors: Owing to the interdisciplinary nature of the Foundations of Sustainability minor, co-directors are proposed in order to maintain the interdisciplinary focus and interdisciplinary integrity of the program by providing administrative balance and consideration to all stakeholders. Co-Directors will have responsibility for all program oversight functions, program quality and data reporting, program evaluation and assessment, and will co-chair the University of Arkansas Sustainability Curriculum Steering Committee. The co-directors will share an equal split of financial resources for a single Program Director position to be created for this program. In accord with UA policies and procedures, the Co-director salary will be based on 25% of the 9-month faculty salary (Each co-director will be awarded salary equivalent to 12.5% of the 9-month faculty salary).

Administrative Specialist I: Financial resources for a 0.5-time Administrative Specialist I are requested. Duties of this program staff person will be maintaining student records, referring inquiries regarding the program to appropriate steering committee members or faculty, general file keeping, assistance with program recruitment, assistance with program data collection and compilation in aid to assessment and evaluation needs.

Graduate Assistants: Two 0.25-time graduate assistants are requested to provide teaching support to faculty involved in SUST 1103 and SUST 2103 and to assist with tracking of student experiential learning during summer months. It is recommended that these GA's be assigned to the Environmental Dynamics PhD program (ENDY) such that individuals chosen for these positions will generally be doctoral students in the ENDY program and familiar with foundational principles of sustainability. The requested stipend is equal to the base stipend of other GA positions in the ENDY program.

Fringe Benefits are requested at standard rates for unclassified/classified personnel and graduate assistants at UA.

A Program Maintenance budget of \$6,000/year is requested to offset costs of telephone service, copying for curriculum needs, general office supplies, printing of recruitment materials for distribution to campus stakeholders and university recruitment initiatives, program web site development and continuous maintenance, and other miscellaneous costs associated with program administration.

Tuition Remission for graduate assistantships is requested at the rate commensurate with 0.25-time assistantships (7.5 hours of graduate tuition annually).

Faculty Release: Understanding the commitment of faculty from various colleges/departments to teaching needs of SUST 1103, SUST 2103, and SUST 4103, funds are requested to compensate departments for the purpose of hiring replacement instructors if needed.

Steering Committee Stipend: Requested to recognize the significant commitment that participation on this steering committee will require. Committee functions will include 1) development of policies and procedures for sustainability academic programs at UA, 2) oversight and review of requests for new sustainability courses or academic programs (e.g. graduate certificates in sustainability), 3) oversight and review of experiential learning projects required for SUST 4103, 4) student submissions and presentations related to SUST 4103 experiential learning requirement, 5) organization of annual student poster presentations for SUST 4103, 6) student advising for the Foundations of Sustainability minor, 7) teaching assignments and content in SUST 1103 and SUST 2103.

Source of funds: Office of the Provost and Vice-Chancellor for Academic Affairs

President/Chancellor Approval Date:

Board of Trustees Notification Date:

Chief Academic Officer

Date:

APPENDIX I: Proposed Syllabus for SUST 1103 Foundations of Sustainability

University of Arkansas Undergraduate Sustainability Minor

Syllabus

SUST 1103 Foundations of Sustainability

Faculty

Multi-disciplinary team from ARSC, ARCH, AFLS, ENGR, COEHP, WCOB and LAW faculty

Social Systems	Prof. Kevin Fitzpatrick
Natural Systems	Prof. Steve Boss
Built Systems	Prof. Tahar Messadi
Managed Systems	Prof. Jennie Pop

Supporting faculty- Carol Gattis, Jon Johnson, Marty Matlock, Kim La Scola Needy, Harrison Pittman and Gregory Benton

Room TBD

Prerequisites NONE

Term SPRING 2011

Purpose and Goals

Foundations of Sustainability is an interdisciplinary course designed to introduce undergraduate students to basic concepts and theories of sustainability at global, regional and local levels. The course is organized around four major thematic areas of sustainability: social systems, natural systems, managed systems and built systems.

The aim of this course is to increase the environmental literacy of students and pave the way for both the creative and persistent engagement of sustainability concerns into the students' own disciplines.

Social Systems

A brief overview concerning who, what, how, and why behind specific social behaviors and dynamics leading to the global environmental crisis will be examined. Theories of social justice and equity are reviewed with a focus on how to improve sustainability for future outcomes. This section will also look at the relationship between social inequality (resource allocation) and sustainability. This uneven distribution of resources impacts certain subgroups more than others; particular attention will be paid to discussing the effects of unequal resource distribution on the poor, indigenous, racial/ethnic minorities, women, and the place-bound in both urban and rural areas.

Natural Systems

Natural Systems provides a modern contextual view of Earth as a closed system with respect to matter and develops concepts of material transfers among various components of the Earth System (atmosphere, hydrosphere, geosphere, biosphere). Emphasis is on developing fundamental understanding of systems science, material transfers and mass balance as a means of understanding complex Earth processes. Introduction to the importance of quantitative measures to document environmental change as well as progress toward or retreat from sustainability will be provided. Interconnectedness of Earth processes and implications of interactions among Earth systems will also be discussed.

Built Systems

Design and construction of buildings with related infrastructure have an adverse effect on the preservation of natural resources and quality of the environment. In this part of the course, we address the sustainable theories and concepts in the context of the built world, with the promise they hold in shaping a better environment, and in changing our views on human-nature relations. Three broad topics will be addressed in the following sequence: regional planning and land use considerations, site-landscape planning and ecological design and production of buildings.

Managed Systems

Managed Systems address foundations of life cycle analysis, agricultural production-distribution mechanisms, customer good production, business, law and policy. The evolution of agricultural systems and the foundations of agricultural practices for meeting sustainability objectives will be examined. Business foundations for sustainability will be covered, including ethics, the role of consumer preferences and the optimization of sustainability objectives throughout the supply chain. A policy implementation approach will provide an exploration of the pertinent US legal system, the roles of international law and the World Trade Organization, and the foundations of environmental law.

Required Texts and Supporting Materials

Texts, supplemental reading and instructional materials will be derived from a combination of chapters from published textbooks, publicly available government and United Nations reports or monographs, sustainability content in the public domain from Internet resources or government agencies, government research laboratories, and non-governmental organizations (NGO's). Additional materials will be developed as needed.

Reaction Papers and Reading Assignments	TBD
Exams	See Tentative Schedule
Grading	TBD
Course Policy	TBD
Course Website	TBD
Teaching Assistants	TBD

CALENDAR

WEEK	DAY	TOPIC
		SOCIAL SYSTEMS
WEEK 1	19-Jan	Course Overview: Content, Expectations, Assessment Method, Exams Overview of the Social Systems Perspective <ul style="list-style-type: none"> • Theories of social behavior • Cultural systems approach (values & attitudes) • Demographic change; past, present, and future
WEEK 2	24-Jan	Environmental Change and Well-Being <ul style="list-style-type: none"> • Global health • Built and social environment effects on health • Improving health with sustainable practices
WEEK 3	31-Jan	Social Justice, Inequality, and Sustainability <ul style="list-style-type: none"> • Theories of inequality • Subgroup differences in resource access • Social and environmental justice movements
		NATURAL SYSTEMS
WEEK 4	7-Feb	Fundamental Tools of Sustainability Measurement <ul style="list-style-type: none"> • Scientific notation and dimensional analysis • Exponential functions and exponential growth
WEEK 5	14-Feb	Scale and Scaling in Natural Systems <ul style="list-style-type: none"> • Measurement vs. estimation Exam #1
WEEK 6	21-Feb	Sustainable Systems Thinking: What Are Earth Systems? <ul style="list-style-type: none"> • The atmosphere, hydrosphere, biosphere and geosphere • Positive and negative feedback in the Earth systems • Sources, sinks and material balance on planetary scale

WEEK 7	28-Feb	Fluxes and Steady State of the Earth System <ul style="list-style-type: none"> • Understanding Earth as an integrated system • Ecology as a system • Case studies and discussion • Overarching Review
		BUILT SYSTEMS
WEEK 8	7-Mar	Sustainable Development of the Built Environment <ul style="list-style-type: none"> • Environmental problems connected to the built infrastructure • Key drivers for sustainable urban-city planning, land use and smart growth • Strategies for sustainable community development (livable communities)
WEEK 9	14-Mar	Theories of Sustainable Site-Landscape <ul style="list-style-type: none"> • Site-landscape as habitat - for human and non-human communities • Site-landscape as a system of low embodied energy, waste and pollution • Site-landscape and water - managing the quantity and quantity of stormwater (LID) <p>Exam #2</p>
WEEK 10	21-Mar	SPRING BREAK
WEEK 11	28-Mar	Principles of Designing Sustainably <ul style="list-style-type: none"> • Hydrologic systems in and around buildings • Place based energy, natural resources and materials utilization • Environmental quality in built structures
WEEK 12	4-Apr	Case Studies of Built Environment and Discussion Overarching review and assessment of sustainability content delivered in this course
		MANAGED SYSTEMS
WEEK 13	11-Apr	Sustainability Metrics in Managed Systems <ul style="list-style-type: none"> • Overview of life cycle assessment and life cycle inventory • Basic stages of conducting a life cycle assessment • Interpreting results, limitations of analysis and making recommendations

WEEK 14	18-Apr	Foundations of Agricultural Systems <ul style="list-style-type: none"> • Evolution of agricultural systems • Foundations of crop, livestock, forestry and specialty crop production • Systems integration for sustainability • Agricultural practices for meeting sustainability objectives
WEEK 15	25-Apr	Business Foundations for Sustainability <ul style="list-style-type: none"> • Ethics in business • Environmental externalities in business decisions across the supply chain • Optimization of sustainability objectives in business
WEEK 16	2-May	Policy Implementation for Sustainability <ul style="list-style-type: none"> • Overview of US legal system pertinent to agriculture and sustainability • Role of international law and the World Trade Organization • Foundations of environmental law Exam #3
	6-May	DEAD DAY
	TBD	FINAL EXAM

APPENDIX II: Proposed Syllabus for SUST 2103 Application of Sustainability

University of Arkansas Undergraduate Sustainability Minor

SUST 2103 Application of Sustainability Syllabus

Faculty

Multi-disciplinary team from ARSC, ARCH, AFLS, ENGR, COEHP, WCOB and LAW faculty

Social Systems	Prof. Kevin Fitzpatrick
Natural Systems	Prof. Steve Boss
Built Systems	Prof. Tahar Messadi
Managed Systems	Prof. Jennie Pop

Supporting faculty- Carol Gattis, Jon Johnson, Marty Matlock, Kim La Scola Needy, Harrison Pittman and Greg Benton

Prerequisites SUST 1103

Term FALL 2011

Purpose and Goals

Building on the content developed in SUST 1103, this multidisciplinary course is designed to introduce students to practical applications of sustainability from multiple perspectives. Bringing together thematic domains of knowledge, i.e., the natural, managed, built and social systems, this course will be taught by University of Arkansas faculty and outside experts to provide a wide range of interest and experience focusing on sustainable development.

A meaningful comprehension of sustainability necessitates a blend of multidisciplinary and specialized learning. In this second course, students, campus-wide, will be exposed to concepts and practices that go beyond the confines of their discipline.

Ultimately, this course will help students identify a particular area of interest they wish to focus upon in their minor of sustainability studies.

Social Systems

In this course, Social Systems studies will focus on three primary areas. The first content area explores the human and social behaviors that have helped create this global ecological crisis. Who is responsible and what can we do to change the outcome will be explored. The second content area examines the relationship between the ecological dynamics and global change and its impact on human health and well-being. The final area explores the uneven distribution of resources around the world and how this global ecological crisis has unfairly impacted the poor, indigenous, racial/ethnic minorities, women, and the place-bound in both urban and rural areas. Environmental/social justice issues continue to be an important part of the sustainability story.

Natural Systems

Principles of natural systems learned in Foundations of Sustainability (SUST 1103) will be incorporated to understand the global carbon cycle. Students will learn about measurement and assessment of greenhouse gases as a component of the global carbon cycle. They will also study the biosphere as a global carbon cycle component, and discuss services rendered to humanity by world ecosystems. In addition, the impact of civilization on the functioning of ecosystems and the global carbon cycle will be explored.

Built Systems

The Built Systems will be focused on the range of methods, techniques, and strategies pertaining to the evaluation and design of a sustainable built environment. Students are challenged to advance creative development scenarios for smart growth of the built environment at the regional, urban and local level. They will understand the advantages of place-based resource conservation, low impact development, livable communities, smart growth and sustainable land management in the planning of cities, buildings and landscapes.

Managed Systems

The managed systems unit will explore how agriculture and business engage and respond to sustainability initiatives throughout the supply chain. The first half of this segment is devoted to a discussion of the competing definitions of sustainability adopted in agriculture and the major efforts within the agricultural community to identify and measure environmental, economic and social sustainability metrics. The remainder of the unit examines issues in enforcement of sustainability and challenges to balancing the goals of sustainability throughout the agricultural and consumer good supply chains.

Project Assignment

In general, the method of *participatory action research* should guide the inquiry. Rather than define the concept of sustainability in just purely linguistic terms, students will work in teams to address the problem and propose a strategy for solving it in social, environmental, business, legal, spatial and economic terms. All assigned work shall be documented via a portfolio to be presented at the end of the semester.

A semester long project will be assigned by the end of the first week, and the formation of the research teams will be facilitated by the teaching assistants. The research project will be conducted by multidisciplinary teams of 4-5 students. No team should have more than two members from a single discipline.

Research will be focused on understanding real problems and proposing real solutions in a sustainable fashion. This final project will be filtered through the ethical, environmental, legal, business-economic, and social implications. The faculty will explain the specifics of the project, and define all the benchmarks to be attained. The project description and specifics remain to be developed.

Required Texts and Supporting Materials

Texts, supplemental reading and instructional materials will be derived from a combination of chapters from published textbooks, publicly available government and United Nations reports or monographs, sustainability content in the public domain from Internet resources or government agencies, government research laboratories, and non-governmental organizations (NGO's). Additional materials will be developed as needed by participating course faculty.

Reaction Papers and Reading Assignments	TBD
Grading	TBD
Course Policy	TBD
Course Website	TBD
Teaching Assistants	TBD
Student Performance Evaluation	

Final course grades will be based upon:

Attendance and Individual class participation	20%
Individual writing assignments	20%
Team research project	50%
Final Presentation	10%

Individual grades for team research will be determined by instructor observation and peer evaluation.

CALENDAR

WEEK	DAY	TOPIC
		SOCIAL SYSTEMS
Week 1	22-Aug	How Did We Get Here? <ul style="list-style-type: none"> Understanding the human processes behind ecological degradation Behavior, attitudes, and norms: Changing the way we think and act Student assessments of their ecological footprint and sustainability profile
Week 2	29-Aug	Environmental Change and its Impact on Health and Well Being <ul style="list-style-type: none"> Understanding resource depletion and its impact on human health Physical and mental health consequences of ecological degradation Student assessment of health risks in their current environments
Week 3	5-Sep	Social/Environmental Justice <ul style="list-style-type: none"> Social, political, psychological and cultural consequences of uneven resource distribution Moral and ethical issues for a sustainable environment Student assessment of sustainable social justice indicators in NWA

		NATURAL SYSTEMS
WEEK 4	12-Sep	The Global Carbon Cycle <ul style="list-style-type: none"> • Data sources on the global carbon cycle • Climate forcing from carbon dioxide • Examination of theoretical versus empirical global warming
WEEK 5	19-Sep	Greenhouse Gas Emissions <ul style="list-style-type: none"> • Types of greenhouse gases • Data on greenhouse gas emissions • Comparison of greenhouse gas emissions to atmospheric greenhouse gas concentrations
WEEK 6	26-Sep	Biodiversity <ul style="list-style-type: none"> • Long-term trends in biodiversity - data • Current trends in biodiversity - data • Understanding biodiversity from a systems perspective
WEEK 7	3-Oct	Ecosystem Services <ul style="list-style-type: none"> • What are ecosystem services (inventorying the breadth of services) • Why ecosystem services are important • Valuation of ecosystem services
		BUILT SYSTEMS
WEEK 8	10-Oct	Regional-Urban Sustainable Development Indicators, Tools and Strategies <ul style="list-style-type: none"> • Sustainable development metrics • Land use, smart growth and low impact development in city planning • Assessment at multiple scales of a regional-urban project development
WEEK 9	17-Oct	Methods and Tools for Building Assessment <ul style="list-style-type: none"> • Understand the concept of building assessment • Building assessment standards such as LEED, Green Globes, Energy Star and others • Field comparison between a traditional and a sustainable building

WEEK 10	24-Oct	Planning of Sustainable Sites-Landscapes <ul style="list-style-type: none"> • Analysis of ecological applications to a site-landscape • Analysis of low impact development in a particular site-landscape • Visit & assessment on sustainable credentials of a local housing development
WEEK 11	31-Oct	Case Studies of Built Environment and Discussion Overarching review and assessment of sustainability content in this course

		MANAGED SYSTEMS
WEEK 12	7-Nov	Defining Sustainability for Agriculture and Business <ul style="list-style-type: none"> • Critical analysis of the competing definitions of sustainability for agriculture and business • Survey and assessment of approaches to sustainable agriculture
WEEK 13	14-Nov	Role of Agriculture and Business in Defining Sustainability <ul style="list-style-type: none"> • Consumer awareness of sustainability • Decision making across supply chains • Efforts to set the sustainability definition • Science, international laws and economic factors: A reality check
WEEK 14	21-Nov	Applications of Sustainability Initiatives Across Agriculture and Business <ul style="list-style-type: none"> • Recent life cycle assessment of the dairy industry • Carbon sequestration, carbon credits and climate change
WEEK 15	28-Nov	Enforcing Sustainability Throughout the Supply Chain <ul style="list-style-type: none"> • Retailer led efforts to create sustainability metrics for business to business transactions • The advantages and disadvantages of certification based decision metrics • Implications enforcement of the Clean Water Act • Case study: OK vs. AR lawsuit over water quality in the Illinois River
WEEK 16	5-Dec	Critical Review of Sustainability Themes Across Agriculture and Business <ul style="list-style-type: none"> • Important agricultural production, business, consumer and legal issues • Addressing the sustainability components through agriculture • Potential challenges and opportunities for agriculture in reaching sustainability goals

8-Dec	DEAD DAY
TBD	FINAL REVIEW

Note- Schedule will be adjusted to include Fall Break

APPENDIX III: Proposed Policies & Procedures for SUST 4103 Capstone Project in Sustainability

University of Arkansas Undergraduate Sustainability Minor

SUST 4103 - Capstone Project in Sustainability Syllabus

Faculty

Multi-disciplinary team from ARSC, ARCH, AFLS, ENGR, COEHP, WCOB and LAW faculty

Teaching Assistant: TBD

Pre-requisites: SUST 1103, SUST 2103, 6 hours of electives in Foundations of Sustainability minor, senior standing or permission of instructor

Term: Spring, Fall, Summer

Time and Place: TBD

CH: 3 Hours

COURSE DESCRIPTION

SUST 4103, CAPSTONE PROJECT IN SUSTAINABILITY, provides students with practical experience focused on service, internship and/or research learning in sustainability. Engagement in community service, work on specific research projects, or other activities related to sustainability offers opportunities for students to integrate as well as synthesize theories and principles learned from prior coursework toward the praxis of sustainability. SUST 4103 is a requirement for students to satisfy the capstone element of the Foundations in Sustainability minor. Students may formally petition the University of Arkansas Sustainability Curriculum Steering Committee (UA SCSC) to substitute sustainability-oriented senior design projects, Honors College research projects, other service learning courses, or equivalent internship experiences for SUST 4103 to satisfy the capstone element of Foundations in Sustainability minor.

Service Learning

Service learning brings together community service and focused academic learning development. The student will perform community service in the field while meeting with their advisor to discuss, assess and reflect on their experience in response to a specific, well-defined learning framework. Service learning offers the opportunity to critically address a wide range of theoretical frameworks presented in class.

Internship Learning

Internship learning is a work-integrated learning program. Through field-based experience, students have the opportunity to strengthen their qualifications and gain a valuable learning experience about sustainability. Internships are to be jointly supervised by a faculty member and a qualified on-site supervisor who will give structure and parameters to the field experience for specific learning outcomes.

Research Learning

Research learning is work that is developed by the student with direction from a faculty member that enables a student to develop an approach for learning about a particular issue of sustainability. Students may choose to conduct work that is purely literature based or the result of field experiments,

surveys, observations, and a variety of acceptable standard research protocols. If necessary, students will be required to obtain IRB approval of their project if their work addresses sustainability issues under the human and animal subject parameters.

COURSE ORGANIZATION

Seminar – 3 Weeks of the Semester

This seminar, planned to meet twice for each of the first three weeks of the semester, is designed to help students specifically propose, organize, and plan their internships, service learning opportunities, or integrative research projects. Students will have an opportunity to better understand the purpose behind service/research learning, while at the same time developing a proposal for their project. Faculty will articulate the precise requirements and standards for the project, expectations for the timing and completion of the project, and acceptable methods for reporting the findings and presenting the final product.

Capstone Experience – 10 Weeks of the Semester

For the remainder of the semester, students will be involved in their own individually or team designed service/research projects. Each project must be approved by the UA Sustainability Curriculum Steering Committee and the student's faculty-advisor. Students will need to maintain a daily journal of their work and be cognizant of their overall project design and the collection of information throughout this experience. Each student will need to report on the significance of their project as it relates to the four thematic areas defined in the Foundations of Sustainability minor. The modalities to help the program administration, the steering committee and faculty-advisors guide and approve the student's selection of the capstone project will be established.

Capstone Project Presentation

Each student will make a presentation at the end of his or her capstone experience. While the steering committee will make some accommodation for students in both spring and summer semesters, a final presentation in the form of a poster session will be developed in which all students are expected to participate. The details of the presentations and the requirements for students will be discussed in the first three weeks of the semester.

Standards and Minimum Criteria for the Capstone Project

Comprehensive reviews of potential capstone projects will be undertaken to develop protocols that will assist (steering committee, faculty-advisors and students) all participants in determining the viability of any capstone project. Protocols will be developed for each venue: service learning, internship learning and research learning, and will outline the minimum requirements to be fulfilled by each student in the pursuit of the capstone project.

E-Portfolio + Capstone Project Submission

A final report of the capstone project shall be included in the student's e-Portfolio. These portfolios will contain a chronology of the student's experience since enrolling in the Sustainability minor. In addition, the e-portfolio will be important to helping coordinate the last step towards the fulfillment of the Minor requirements, such as deadline of submission, presentation, grading, etc.

READING: TBD

GRADING AND ATTENDANCE: TBD

CALENDAR

WEEK	DAY	TOPICS - (MORE DEVELOPMENT IS UNDERWAY)
SEMINAR		
WEEK 1	19-Jan	Orientation, What is Service Learning, Internship Learning, Research Learning?
	21-Jan	Orientation, What is Service Learning, Internship Learning, Research Learning?
WEEK 2	24-Jan	Expectations - What Am I Supposed To Do?
	25-Jan	Expectations - What Am I Supposed To Do?
WEEK 3	31-Jan	Case Study Presentations of Pertinent Projects
	4-Feb	Case Study Presentations of Pertinent Projects

INTERNSHIP, SERVICE LEARNING or RESEARCH CAPSTONE PROJECT DEVELOPMENT

Student works under the supervision of an advisor

WEEK 4	7-Feb	<p>MEETINGS SCHEDULE DETERMINED BETWEEN ADVISOR AND STUDENT</p> <p>NOTE: SOME STUDENTS MAY CONDUCT CAPSTONE PROJECT DURING SUMMER TERM</p>
WEEK 5	14-Feb	
WEEK 6	21-Feb	
WEEK 7	28-Feb	
WEEK 8	7-Mar	
WEEK 9	14-Mar	
WEEK 10	21-Mar	SPRING BREAK

WEEK 11	28-Mar	MEETINGS SCHEDULE DETERMINED BETWEEN STUDENT AND ADVISOR	NOTE: IBID
WEEK 12	4-Apr		
WEEK 13	11-Apr		
WEEK 14	18-Apr		

FINAL REVIEW OF CAPSTONE PROJECT			
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WEEK 15	25-Apr	PRESENTATION OF CAPSTONE PROJECT	NOTE - PRESENTATIONS MAY BE HELD AT SUMMER END
	28-Apr	PRESENTATION OF CAPSTONE PROJECT	
WEEK 16	2-May	PRESENTATION OF CAPSTONE PROJECT	
	4-May	PRESENTATION OF CAPSTONE PROJECT	