

**Undergraduate Curriculum Committee
Western Kentucky University**

Report to the University Senate:

Date: October 24, 2013

From: Ashley Fox, Chair

The Undergraduate Curriculum Committee submits the following items from the October 24th, 2013, meeting for approval by the University Senate:

Information Item Report

- I. Revise Course Prerequisites / Corequisites:
 FACS 381
 FACS 481
 AMS 303

- II. Revise Course Catalog Listing:
 NUR 105
 NUR 155
 NUR 165
 NUR 208
 NUR 215
 NUR 254
 NUR 255

- III. Delete a Course:
 DMT 303
 GC 313

- IV. Delete a Program:
 345 Child Life Minor

Consent Item Report

- I. Revise a Program:
 398 Interior Design Minor
 531 Interior Design & Fashion Merchandising

- II. Create a New Minor Program:
 Family Home Visiting
 Systems Engineering

- III. Create a New Major:
 Major in Criminology

- IV. Create a New Course

ENGR 400

V. Policy and Procedure Committee

Create an Academic Policy: Advising Relative to Declaration and Change of Program of Study

Create an Academic Policy: Credit for Prior Learning Policy

Proposal Date: 8/15/2013

**College of Health and Human Services
Department of Family and Consumer Sciences
Proposal to Revise Course Prerequisites
(Consent Item)**

Contact Person: Kathy Croxall, kathy.croxall@wku.edu, 745-3997

- 1. Identification of course:**
 - 1.1 Course prefix and number: FACS 381
 - 1.2 Course title: Methods and Materials in Family & Consumer Sciences
- 2. Current prerequisites:** a. Junior standing in Family and Consumer Sciences Education or Dietetics; and b. FACS 380 Communication Techniques in Family and Consumer Sciences; and c. EDU 250 for FCS Ed majors, or consent of instructor.
- 3. Proposed prerequisites:** a. Junior standing in Family and Consumer Sciences Education; and b. FACS 380 Communication Techniques in Family and Consumer Sciences; and c. **MGE 275 Foundations of Middle Grades Instruction** for FCS Ed majors, or consent of instructor.
- 4. Rationale for the revision of prerequisites:** The FCS Education program has recently been changed and EDU 250, Introduction to Teacher Education is no longer required for the program. MGE 275, Foundations of Middle Grades Instruction is now the introductory education class for this major. Dietetics majors are no longer required to take this course, so that wording has been dropped.
- 5. Effect on completion of major/minor sequence:** This will have no effect on completion of the degree.
- 6. Proposed term for implementation:** Summer 2014
- 7. Dates of prior committee approvals:**

Family and Consumer Sciences Department	<u>Aug. 19, 2013</u>
-----------------------------------------	----------------------

CHHS Undergraduate Curriculum Committee	<u>Sept. 30, 2013</u>
-----------------------------------------	-----------------------

Professional Education Council	<u>Oct. 9, 2013</u>
--------------------------------	---------------------

Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
------------------------------------	--------------------------------------------

University Senate

Proposal Date: 8/15/2013

**College of Health and Human Services
Department of Family and Consumer Sciences
Proposal to Revise Course Prerequisites
(Consent Item)**

Contact Person: Kathy Croxall, kathy.croxall@wku.edu, 745-3997

- 1. Identification of course:**
 - 1.1 Course prefix and number: FACS 481
 - 1.2 Course title: Advanced Methods in Family and Consumer Sciences Education
- 2. Current prerequisites:** none
- 3. Proposed prerequisites:** a. Senior standing; and b. FACS 381 or consent of instructor.
- 4. Rationale for the revision of prerequisites:** This course builds on the content of FACS 381, Methods and Materials in Family & Consumer Sciences, and assumes the students are family and consumer sciences education majors and have completed the majority of the FACS content, making it difficult for students without that preparation to be successful in the course.
- 5. Effect on completion of major/minor sequence:** This will have no effect on completion of the degree.
- 6. Proposed term for implementation:** Summer 2014
- 7. Dates of prior committee approvals:**

Family and Consumer Sciences Department	<u>Aug. 19, 2013</u>
CHHS Undergraduate Curriculum Committee	<u>Sept. 30, 2013</u>
Professional Education Council	<u>Oct. 9, 2013</u>
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	<u></u>

Proposal Date: 09/03/2013

**Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Revise Course Prerequisites
(Consent Item)**

Contact Person: John Khouryieh, hanna.khouryieh@wku.edu, 270-745-4126

1. Identification of course:

- 1.1 Course prefix (subject area) and number: AMS 303
- 1.2 Course title: Food Laws & Regulations

2. Current prerequisites: AMS 301

3. Proposed prerequisites: None

4. Rationale for the revision of prerequisites:

The purpose of this course is to provide students with a basic knowledge of and familiarity with the principal laws and regulations governing raw and processed foods.

The course content does not require knowledge of the science of food.

Below are some examples of universities that offer this course without prerequisites:

Michigan State University, University of Arkansas, University of Georgia, University of Wisconsin-Madison, Texas A&M University, University of Tennessee, and Purdue University.

5. Effect on completion of major/minor sequence: None

6. Proposed term for implementation: Fall 2014

7. Dates of prior committee approvals:

AMS Department

09/20/2013

OCSE Curriculum Committee

10/10/2013

Undergraduate Curriculum Committee

Thursday, Oct 24th, 2013

University Senate

Proposal Date: September 16, 2013

**College of Health and Human Services
School of Nursing
Proposal to Revise Course Catalog Listing
(Consent Item)**

Contact Person: Kim Green, kim.green@wku.edu, 745-8960

1. Identification of course:

- 1.1 Course prefix and number: NUR 105
- 1.2 Course title: Fundamentals of Nursing

2. Current course catalog listing: Introduces fundamental nursing concepts and principles utilizing basic human needs, developmental theory, nursing process, and therapeutic nursing interventions to promote and maintain health for selected populations.

3. Proposed course catalog listing: Introduces fundamental nursing concepts and principles utilizing basic human needs, developmental theory, nursing process, and evidence-based interventions to promote and maintain health for selected populations.

4. Rationale for revision of the course catalog listing: A curriculum revision was made to update terminology and incorporate new concepts in accordance with the National League for Nursing Educational Outcomes.

5. Proposed term for implementation: Summer 2014

6. Dates of prior committee approvals:

Associate Degree Nursing Program	August 22, 2013
CHHS Undergraduate Curriculum Committee	<u>Sept. 30, 2013</u>
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	_____

Proposal Date: September 16, 2013

**College of Health and Human Services
School of Nursing
Proposal to Revise Course Catalog Listing
(Consent Item)**

Contact Person: Kim Green, kim.green@wku.edu, 745-8960

1. Identification of course:

- 1.1 Course prefix and number: NUR 155
- 1.2 Course title: Medical Surgical Nursing I

2. Current course catalog listing: Medical –surgical concepts utilizing basic human needs, developmental theory, nursing process, and therapeutic nursing interventions to promote and maintain health for selected populations.

3. Proposed course catalog listing: Medical –surgical concepts utilizing basic human needs, developmental theory, nursing process, and evidence-based interventions to promote and maintain health for selected populations.

4. Rationale for revision of the course catalog listing: A curriculum revision was made to update terminology and incorporate new concepts in accordance with the National League for Nursing Educational Outcomes.

5. Proposed term for implementation: Summer 2014

6. Dates of prior committee approvals:

Associate Degree Nursing Program	August 22, 2013
CHHS Undergraduate Curriculum Committee	<u>Sept. 30, 2013</u>
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	_____

Proposal Date: August 22, 2013

**College of Health and Human Services
School of Nursing
Proposal to Revise Course Catalog Listing
(Consent Item)**

Contact Person: Kim Green, kim.green@wku.edu, 745-8960

1. Identification of course:

- 1.1 Course prefix and number: NUR 165
- 1.2 Course title: Mental Health Nursing

2. Current course catalog listing: Includes mental health nursing concepts utilizing basic human needs, developmental theory, nursing process and therapeutic nursing interventions to promote and maintain health for selected populations.

3. Proposed course catalog listing Includes mental health nursing concepts utilizing basic human needs, developmental theory, nursing process and evidence-based interventions to promote and maintain health for selected populations.

4. Rationale for revision of the course catalog listing: A curriculum revision was made to update terminology and incorporate new concepts in accordance with the National League for Nursing Educational Outcomes.

5. Proposed term for implementation: Summer 2014

6. Dates of prior committee approvals:

Associate Degree Nursing Program	August 22, 2013
CHHS Undergraduate Curriculum Committee	<u>Sept. 30, 2013</u>
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	_____

Proposal Date: August 22, 2013

**College of Health and Human Services
School of Nursing
Proposal to Revise Course Catalog Listing
(Consent Item)**

Contact Person: Kim Green, kim.green@wku.edu, 745-8960

1. Identification of course:

- 1.1 Course prefix and number: NUR 208
- 1.2 Course title: Medical Surgical Nursing II

2. Current course catalog listing: Expansion on previous medical –surgical concepts utilizing basic human needs, developmental theory, nursing process, and therapeutic nursing interventions to promote and maintain health for selected populations.

3. Proposed course catalog listing: Expansion on previous medical –surgical concepts utilizing basic human needs, developmental theory, nursing process, and evidence-based interventions to promote and maintain health for selected populations.

4. Rationale for revision of the course catalog listing: A curriculum revision was made to update terminology and incorporate new concepts in accordance with the National League for Nursing Educational Outcomes.

5. Proposed term for implementation: Summer 2014

6. Dates of prior committee approvals:

Associate Degree Nursing Program	<u>August 22, 2013</u>
CHHS Undergraduate Curriculum Committee	<u>Sept. 30, 2013</u>
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	_____

Proposal Date: August 22, 2013

**College of Health and Human Services
School of Nursing
Proposal to Revise Course Catalog Listing
(Consent Item)**

Contact Person: Kim Green, kim.green@wku.edu, 745-8960

1. Identification of course:

- 1.1 Course prefix and number: NUR 215
- 1.2 Course title: Maternal-Newborn Nursing

2. Current course catalog listing: Includes maternal-newborn nursing concepts utilizing basic human needs, developmental theory, nursing process and therapeutic nursing interventions to promote and maintain health for selected populations.

3. Proposed course catalog listing Includes maternal-newborn nursing concepts utilizing basic human needs, developmental theory, nursing process and evidence-based interventions to promote and maintain health for selected populations.

4. Rationale for revision of the course catalog listing: A curriculum revision was made to update terminology and incorporate new concepts in accordance with the National League for Nursing Educational Outcomes.

5. Proposed term for implementation: Summer 2014

6. Dates of prior committee approvals:

Associate Degree Nursing Program	August 22, 2013
CHHS Undergraduate Curriculum Committee	<u>Sept. 30, 2013</u>
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	_____

Proposal Date: August 22, 2013

**College of Health and Human Services
School of Nursing
Proposal to Revise Course Catalog Listing
(Consent Item)**

Contact Person: Kim Green, kim.green@wku.edu, 745-8960

1. Identification of course:

- 1.1 Course prefix and number: NUR 254
- 1.2 Course title: Pediatric Nursing

2. Current course catalog listing: Includes pediatric nursing concepts utilizing basic human needs, developmental theory, nursing process and therapeutic nursing interventions to promote and maintain health for selected populations.

3. Proposed course catalog listing: Includes pediatric nursing concepts utilizing basic human needs, developmental theory, nursing process and evidence-based interventions to promote and maintain health for selected populations.

4. Rationale for revision of the course catalog listing: A curriculum revision was made to update terminology and incorporate new concepts in accordance with the National League for Nursing Educational Outcomes.

5. Proposed term for implementation: Summer 2014

6. Dates of prior committee approvals:

Associate Degree Nursing Program	August 22, 2013
CHHS Undergraduate Curriculum Committee	<u>Sept. 30, 2013</u>
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	_____

Proposal Date: August 22, 2013

**College of Health and Human Services
School of Nursing
Proposal to Revise Course Catalog Listing
(Consent Item)**

Contact Person: Kim Green, kim.green@wku.edu, 745-8960

1. Identification of course:

- 1.1 Course prefix and number: NUR 255
- 1.2 Course title: Medical Surgical Nursing III

2. Current course catalog listing: Expansion on previous medical –surgical concepts utilizing basic human needs, developmental theory, nursing process, and therapeutic nursing interventions to promote and maintain health for selected populations.

3. Proposed course catalog listing: Expansion on previous medical –surgical concepts utilizing basic human needs, developmental theory, nursing process, and evidence-based interventions to promote and maintain health for selected populations.

4. Rationale for revision of the course catalog listing: A curriculum revision was made to update terminology and incorporate new concepts in accordance with the National League for Nursing Educational Outcomes.

5. Proposed term for implementation: Summer 2014

6. Dates of prior committee approvals:

Associate Degree Nursing Program	August 22, 2013
CHHS Undergraduate Curriculum Committee	<u>Sept. 30, 2013</u>
Undergraduate Curriculum Committee	Thursday, Oct 24 th , 2013
University Senate	_____

Proposal Date: August 19, 2013

**College of Health & Human Services
Family and Consumer Sciences
Proposal to Delete a Course
(Consent Item)**

Contact Person: Sheila S. Flener, Sheila.flener@wku.edu, 745-4105

1. Identification of course:

- 1.1 Current course prefix and number: DMT 303
- 1.2 Course title: Lighting Design

2. Rationale for the course deletion: DMT 303 (Lighting Design) was replaced with IDFM 304 (Lighting and Environmental Controls). The course will no longer be used.

3. Effect of course deletion on programs or other departments, if known: The deletion of DMT 303 has no effect on programs or other departments.

4. Proposed term for implementation: Spring 2014

5. Dates of prior committee approvals:

Family and Consumer Sciences Department Aug. 19, 2013

CHHS Undergraduate Curriculum Committee Sept. 30, 2013Undergraduate Curriculum Committee Thursday, Oct 24th, 2013

University Senate

Proposal Date: 9/26/13

**Ogden College of Science and Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Delete a Course
(Consent Item)**

Contact Person: Dr. Greg Arbuckle, greg.arbuckle@wku.edu, 745-6592

1. Identification of course:

- 1.1 Current course prefix (subject area) and number: GC 313
- 1.2 Course title: Technical Drafting
- 1.3 Credit hours: 3

2. Rationale for the course deletion: This course has not been offered in over 10 years. All other courses with this prefix were either deleted many years ago or were incorporated into the AMS prefix. Somehow this one course persisted. This is a “housekeeping” issue.

3. Effect of course deletion on programs or other departments, if known:
None

4. Proposed term for implementation:
Spring 2014

5. Dates of prior committee approvals:

AMS Department/Division:	<u>09/26/2013</u>
Ogden Curriculum Committee	<u>10/10/2013</u>
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	<u></u>

Attachment: Course Inventory Form

Proposal Date: August 19, 2013

**College of Health and Human Services
Department of Family and Consumer Sciences
Proposal to Delete a Program
(Consent Item)**

Contact Person: Darbi Haynes-Lawrence, darbi.Haynes-Lawrence@WKU.edu, 745-2525

1. Identification of program:

- 1.1 Program reference number: 345
1.2 Program title: Child Life Minor
1.3 Credit hours: 21

- Rationale for the program deletion:** We are no longer able to support students in meeting the requirements to become a Child Life Specialist, due to changes at the National Child Life Council level.

3. **Effect on current students or other departments, if known:** Students who are currently in the Child Life minor will be able to complete the minor with no problems. Students will no longer be able to declare this minor after the acceptance of this proposal.

4. **Proposed term for implementation:** Spring, 2014

5. Dates of prior committee approvals:

Family and Consumer Sciences Department Aug. 19, 2013

CHHS Undergraduate Curriculum Committee

Undergraduate Curriculum Committee Thursday, Oct 24th, 2013

University Senate

College of Health & Human Services
Department of Family & Consumer Sciences
Proposal to Revise a Program
(Action Item)

Contact Person: Sheila S. Flener, sheila.flener@wku.edu, 745-4105

1. Identification of program:

- 1.1 Current program reference number: 398
- 1.2 Current program title: Interior Design Minor
- 1.3 Credit hours: 22

2. Identification of the proposed program changes:

Changes to the Interior Design Minor are as follows:

- Changing 11 hours of restricted electives to restricted courses and 1 elective.
- IDFM 243 to replace DMT 110
- IDFM 304 to replace DMT 303

3. Detailed program description:

Current Program				Proposed Program			
Program Description				New Program Description			
The minor in interior design requires 22 semester hours. A grade of "C" or above must be earned in the following courses required for this minor: DMT 110, IDFM 120, 201 and 11 hours of restricted electives chosen in consultation with departmental advisor.				The minor in interior design requires 22 semester hours. A grade of "C" or above must be earned in the following courses required for this minor: core courses: IDFM 120, 201, 243 and 9 hours of upper division courses: IDFM 300, 304, 403 and 3 hours of restricted electives chosen in consultation with departmental advisor.			
Prefix	#	Course Title	Hrs.	Prefix	#	Course Title	Hrs.
DMT	110	Design Concepts	3				
IDFM	120	Visual Design I	3*	IDFM	120	Visual Design I	3
				IDFM	243	Materials & Finishes	3
IDFM	201	ID Studio I	4	IDFM	201	ID Studio I	4
		Restricted Electives	11	IDFM	300	ID Studio II	4
				IDFM	304	Lighting & Env/Cntrl.	3
				IDFM	403	Business Pring/Prac	2
				IDFM		ID Elective	3
TOTALS		Credit Hours	22*	TOTALS		Credit Hours	22

* IDFM 120 hours were changed from 4 to 3 hours during the fall 2012.

4. Rationale for the proposed program change:

- Changes to the Interior Design minor are necessary due to curriculum changes made to the ID program during the fall of 2012.
- Strengthening the curriculum of the interior design minor will meet strategic goal #3: Improving the quality of life in our communities. The proposed curriculum covers social responsible design and will add additional skills of presentation techniques not offered before.

5. Proposed term for implementation and special provisions: Fall 2014

6. Dates of prior committee approvals:

Family and Consumer Sciences Department	<u>Aug. 19, 2013</u>
CHHS Undergraduate Curriculum Committee	<u>Sept. 30, 2013</u>
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	<u></u>

**College of Health and Human Services
Department of Family and Consumer Sciences
Proposal to Revise A Program
(Action Item)**

Contact Person: Sheila S. Flener, sheila.flener@wku.edu, 745-4105

1. Identification of program:

- 1.1 Current program reference number: 531
- 1.2 Current program title: Interior Design & Fashion Merchandising
- 1.3 Credit hours: 81

2. Identification of the proposed program changes:

- Changing minimum required credit hours from 81 to 78 for the Interior Design concentration, and, thus, for major of Interior Design & Fashion Merchandising (IDFM) to meet SACS requirements.
- Dropping IDFM 322 Merchandising I from the Interior Design curriculum to meet the required minimum credit hours.

3. Detailed program description:

Current Program			Proposed Program		
Program Description: The major in Interior Design & Fashion Merchandising (reference number 531) requires a minimum of 75- 81 semester hours and leads to a Bachelor of Science degree. The program offers two concentrations: interior design, and fashion merchandising. A grade of "C" or above must be earned in the required major/support courses. No minor or second major is required.			Program Description: The major in Interior Design & Fashion Merchandising (reference number 531) requires a minimum of 75- 78 semester hours and leads to a Bachelor of Science degree. The program offers two concentrations: interior design, and fashion merchandising. A grade of "C" or above must be earned in the required major/support courses. No minor or second major is required.		
<i>Fashion Merchandising: No change</i>			<i>Fashion Merchandising: No change in curriculum</i>		
Interior Design Concentration			Interior Design Concentration		
Course #	Course Title	Hrs	Course #	Course Title	Hrs
IDFM 101	Foundations of Interior Design	1	IDFM 101	Foundations of Interior Design	1
IDFM 120	Visual Design I	4	IDFM 120	Visual Design I	3
IDFM 151	Survey of Architecture I	3	IDFM 151	Survey of Architecture I	3
IDFM 152	Survey of Architecture II	3	IDFM 152	Survey of Architecture II	3
IDFM 201	Interior Design Studio I	4	IDFM 201	Interior Design Studio I	4
IDFM 221	Visual Design II	3	IDFM 221	Visual Design II	3
IDFM 222	CAD in Human Environment	3	IDFM 222	CAD in Human Environment	3

IDFM 223	Textiles	3	IDFM 223	Textiles	3
IDFM 243	Materials and Finishes for Interior Design	3	IDFM 243	Materials and Finishes for Interior Design	3
IDFM 300	Interior Design Studio II	4	IDFM 300	Interior Design Studio II	4
IDFM 301	Interior Design Studio III	4	IDFM 301	Interior Design Studio III	4
IDFM 302	Interior Design Studio IV	4	IDFM 302	Interior Design Studio IV	4
IDFM 304	Lighting and Environ/Cntrls	3	IDFM 304	Lighting and Environ/Cntrls	3
IDFM 321	Professional Issues and Ethics	3	IDFM 321	Professional Issues and Ethics	3
IDFM 322	Merchandising I	3			
IDFM 401	Interior Design Studio V	4	IDFM 401	Interior Design Studio V	4
IDFM 402	Senior Design Thesis	4	IDFM 402	Senior Design Thesis	4
IDFM 403	Bus. Prin. & Practices for ID	2	IDFM 403	Bus. Prin. & Practices for ID	2
IDFM 410	IDFM Internship	3	IDFM 410	IDFM Internship	3
IDFM 421	Portfolio Design	3	IDFM 421	Portfolio Design	3
IDFM 422	Textile Design and Perform.	3	IDFM 422	Textile Design and Performance	3
IDFM 427	Visual Design III	3	IDFM 427	Visual Design III	3
FACS 310	Mgmt. of Family Resources	3	FACS 310	Management of Family Resources	3
FACS 311	Family Relations	3	FACS 311	Family Relations	3
MKT 220	Basic Marketing Concepts	3	MKT 220	Basic Marketing Concepts	3
Elective selected with advisor		3	Elective selected with advisor		3
Total Hours		81	Total Hours		78

4. Rationale for the proposed program changes:

- IDFM 322 (Merchandising I) focuses on buying plans for the apparel industry, which does not meet the needs of the interior design professional. Business related topics that meet the needs of the interior design professional are currently discussed in IDFM 243 (Materials and Finishes) and IDFM 403 (Business Principles and Practices).
- Deleting IDFM 322 (Merchandising I) will assist with lowering the required credits from 81 to 78. The table below shows the current required credit hours for Benchmark Institutions along with the current curriculum merchandising requirement.

Benchmark Institutions		
University	Hours needed	Merchandising course required
Ball State University	76	No
California State University - Chico	72	No
California State University - Fresno	82	No
University of Central Missouri	83	No
Eastern Michigan University	76	No
Indiana State University	79	No
Middle Tennessee State University	75	No
Northern Arizona University	76	No
Missouri State University	80	No

Stephen F. Austin State University	82	Yes
University of Northern Iowa	64	No

5. **Proposed term for implementation:** Fall 2014

6. **Dates of prior committee approvals:**

FACS Department: 8/19/2013

CHHS Undergraduate Curriculum Committee Sept. 30, 2013

Undergraduate Curriculum Committee Thursday, Oct 24th, 2013

University Senate

Proposal Date: August 19, 2013

**College of Health and Human Services
Department of Family and Consumer Sciences
Proposal to Create a New Minor Program
(Action Item)**

Contact Person: Darbi Haynes-Lawrence, Darbi.Haynes-Lawrence@wku.edu, 745-2525

1. Identification of program:

- 1.1 Program title: Family Home Visiting Minor
- 1.2 Required hours in minor program: 21
- 1.3 Special information: None
- 1.4 Catalog description: The Family Home Visiting minor will prepare students to provide home visiting services. Potential clients include those needing parenting skills, those at risk for abusing and neglecting their children, and/or those who need other support services. The minor in Family Home Visiting requires a minimum of 21 semester hours. A grade of "C" or above must be earned in the following FACS course required for this minor: FACS 191, 294, 393, 395, 494, 496, and 497.

2. Rationale:

- 2.1 Reason for developing the proposed minor program: The Family Home Visiting minor is being developed to increase the knowledge base of students who are interested in the field of home visiting. The Family Home Visiting certificate program has grown to the point that creating a minor would benefit students as more topics of home visiting could be reviewed, thus better preparing them for the profession of home visiting. This minor will increase the training and marketability of WKU students. Student who complete this minor will be better prepared to enter employment positions where home visits are conducted, such as Head Start, Early Head Start, HANDS, Healthy Start, Parents as Teachers, Healthy Families America, Save the Children, etc.
- 2.2 Projected enrollment in the proposed minor program: 10-20 per academic year initially, with possible increases over time.
- 2.3 Relationship of the proposed minor program to other programs now offered by the department: The Family Home Visiting minor is similar to the Family Home Visiting Certificate. The certificate is made up of these classes: FACS 395, 494, 497 and one elective. The certificate program has grown to the point that creating a minor would benefit students as more topics of home visiting could be reviewed. The proposed minor will be in addition to the existing certificate program. The certificate program will be kept per the request of advisors in the Bachelor of Interdisciplinary Studies (BIS) as BIS students are not allowed to minor.
- 2.4 Relationship of the proposed minor program to other university programs: The proposed Family Home Visiting minor does not duplicate any other program in the university.

- 2.5 Similar minor programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions): No minors in Family Home Visiting were found at any benchmark institutions.
- 2.6 Relationship of the proposed minor program to the university mission and objectives: The proposed minor relates to strategic goal 1 -- *Foster Academic Excellence*, objective 1.5 (Prepare students for lifelong learning and success); strategic goal 3 *Improve Quality of Life for our Communities*, objective 3.1 and 3.2.

3. Objectives of the proposed minor:

Upon completion of this minor, students will be able to:

- Manage and maintain home visits,
- Identify ethical and professional issues of home visiting,
- Provide support for new parents,
- Understand and describe the role of child and family stress in family functioning,
- Understand and describe parenting strategies,
- Provide appropriate information for positive parenting,
- Create a family centered atmosphere,
- Conduct ongoing assessments including needs assessments and family assessment,
- Address challenges and barriers to working with families,
- Model interviewing techniques for families with sensitive issues,
- Demonstrate appropriate strategies of handling challenging behaviors in young children.

4. Program description:

4.1 Curriculum:

The courses required for this minor include the following. Students must earn at least a "C" in all courses.

FACS 191	Child Development	3 hours
FACS 294	Assessment of Young Children	3 hours
FACS 393	Play and Child Development	3 hours
FACS 395	Child and Family Stress	3 hours
FACS 494	Parenting Strategies	3 hours
FACS 496	Challenging Behaviors	3 hours
FACS 497	Family Home Visiting	3 hours
Total:		21 hours

4.2 Accreditation, Certification, approval, and/or licensure: None

4.3 Program Delivery: The classes in this program will be delivered online and face to face.

5. Budget implications: Required courses are currently taught on a regular basis by existing faculty.

6. Proposed term for implementation: Fall, 2014

7. Dates of prior committee approvals:

Family and Consumer Sciences Department

Aug. 19, 2013

CHHS Undergraduate Curriculum Committee

Sept. 30, 2013

Undergraduate Curriculum Committee

Thursday, Oct 24th, 2013

University Senate

**Ogden College of Science and Engineering
Department of Engineering
Proposal to Create a Systems Engineering Minor Program
(Action Item)**

Contact Person: Robert E. Choate, robert.choate@wku.edu, 745-8852

1. Identification of program:

- 1.2 Program title: Systems Engineering
- 1.3 Required hours in minor program: 21 (CE Majors), 21.5 (EE Majors) or 21 (ME Majors)
- 1.4 Special information: none
- 1.5 Catalog description: Systems engineering is a robust approach to the design, creation, and operation of systems.

2. Rationale:

1.1 Reason for developing the proposed minor program:

Several significant trends in the global environment are leading to the emergence of a more widespread and effective application of the systems engineering practice. There is a growing realization that systems engineering is essential to successfully design, develop and sustain the highly complex systems of the 21st century. Therefore, an increasing number of universities are offering programs in systems engineering, while simultaneously a number of corporations in the commercial and defense sectors have articulated needs for systems engineering skills and competencies. The demand in these sectors is strong for trained, experienced systems engineers, especially those who can think holistically about complex problems, are comfortable with the increasing complexity of systems that address those problems, can manage the uncertainty and complexity of the environment in which those systems are being built, and can respond to demands to shorten the time to deliver systems to the field.

1.2 Projected enrollment in the proposed minor program:

The primary constituents of this program initially will be majors in civil, electrical and mechanical engineering. It is projected that approximately 25 students will participate in this minor per year. This estimate is determined by anticipating that 40% of a cohort of engineering students will enroll in the minor each year. The percentage used in this estimation was also supported by the number of students who enrolled in the initial offering of the principles of systems engineering course in the fall 2012 and summer 2013.

1.3 Relationship of the proposed minor program to other programs now offered by the department:

In the proposed structure for engineering at WKU, a core of systems engineering courses will be used to expand the traditional engineering disciplines (e.g. civil engineering, electrical engineering, mechanical engineering) currently offered by the department. Therefore, the groundwork established by the Department of Engineering will be strengthened and diversified by the inclusion of a systems engineering minor curriculum.

1.4 Relationship of the proposed minor program to other university programs:

Numerous elective courses and programs outside of WKU engineering were reviewed (e.g., manufacturing sciences, business, mathematics and statistics) for comparison and possible inclusion in the minor. Of particular interest was the minor in statistics. However, the initial offering is limited to engineering majors with future expansion to an interdisciplinary approach desired. In this manner, education in systems thinking and systems engineering can begin to permeate WKU, and future collaborations, such as with the statistics minor, will be established among departments and colleges. There is likely to be fluidity of curricula and a resulting fluidity of faculty among these departments and programs. The expectation is that systems engineering will remain an area of study of its own; however, there is a potential for the study of systems thinking to become interwoven into our academic fabric.

1.5 Similar minor programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions): There are currently no systems engineering minors at any Kentucky institution and only one benchmark institution, University of North Carolina – Charlotte, has a Bachelor of Science Program in Systems Engineering (BSSE).

1.6 Relationship of the proposed minor program to the university mission and objectives:

The field of systems engineering is emerging as a connector between many of the traditional engineering fields. The proposed minor in systems engineering will offer students the opportunity to expand their understanding of systems and how the effective management of systems influences virtually every aspect of our global societal challenges. Students who complete this minor will be better prepared to successfully solve many of these modern engineering challenges. It is the mission of WKU engineering to prepare students of all backgrounds to be productive, engaged, and socially responsible citizen-leaders of a global society. This minor will only serve to enhance the university mission and objectives.

3. Objectives of the proposed minor:

A systems engineering minor will provide a pathway for students through an extension of regular engineering courses. This is consistent with the industry attitude that engineering students need a foundational background in one of the traditional engineering disciplines, plus practical, real-world experience to become effective as systems engineers. Unlike systems-centric programs, which treat systems engineering as a separate discipline where most of the courses are taught focusing on systems engineering principles and practice, our domain-centric program offers systems engineering as an option that can be exercised within another major field in engineering. Therefore, the objectives for the graduate in engineering with a systems engineering minor are:

- to attain programmatic or technical leadership roles in an organization identifying, formulating, designing and/or testing practical solutions to engineering problems and guide the engineering development of modern complex and interdisciplinary systems; while,

- employing systems engineering methods and tools in the development of advanced complex and interdisciplinary systems.

4. Curriculum:

The Systems Engineering Minor requires a minimum of 21 hours for CE and ME majors and 21.5 hours for EE majors. Students must complete 12 or 12.5 hours of required courses and choose a minimum of 9 hours from elective courses as shown in Tables 1 and 2 below.

Table 1: Systems Engineering Minor Required Courses

Course	Description	Credit Hours
EE 210 or EM 221or EM 222	Circuits and Networks I or Engineering Statics	3.5 (EE) or 3 (CE or ME)
STAT 301	Applied Statistics	3
ENGR 400	Principles of Systems Engineering	3
CE 498 or EE 401 or ME 412	Capstone Project*	3
TOTAL		12.5 (EE) or 12 (CE/ME)

* A panel review of the student senior project proposal is required. The proposal must incorporate systems engineering principles outlined in ENGR 400.

Table 2: Systems Engineering Minor Elective Courses (Minimum Required: 9 Credit Hours)

Course	Description	Credit Hours
CE 303/304	Construction Management/Lab	3/1
CE 4xx**	CE Technical Electives	6
EE 460	Continuous Control Systems	4
EE 4xx**	EE Technical Electives	6
EM 313	Dynamics	3
ME 49x**	ME Technical Electives	6

** The technical elective must incorporate or expand on systems engineering principles as outlined in ENGR 400 Principles of Systems Engineering. Technical elective courses currently meeting this intent include but are not limited to: CE300 Floodplain Management, CE326 Engineering Law, CE360 Estimating Scheduling Bidding, CE361 Estimating Lab, CE366 Mechanical and Electrical Systems, CE378 Route Surveying, CE379 Route Surveying Lab, CE380 Boundary Surveying, CE381 Boundary Surveying Lab, CE383 Structural Steel Design, CE384 Reinforced Concrete Design, CE426 Advanced Structural Materials, CE436 Design/ Construction Integration, CE440 Masonry Design and Construction, CE441, Masonry Construction Lab, CE451 Water and Wastewater Treatment, CE462 Hydraulic Engineering Systems, CE466 Contracts and Specifications, CE476 Highway Construction, CE486 Steel and Concrete Construction, EE410/411 Computer Design, EE443 Microfabrication and MEMS, EE 431 Introduction to Power Systems, EE432 Power Systems II, EE461 Discrete Control Systems, EE443 Communication Applications, ME49X Reliability Engineering, ME49X Advanced Strength of Materials, ME 49X, Energy Conversion and Sustainability, ME49X Failure Analysis and Prevention, ME 49X Finite Element Analysis and ME49X Kinematics and Dynamics.

5. **Budget implications:** The courses within the new minor will be and have been regularly taught as engineering science elective courses. Students will choose elective courses that fulfill the minor. The teaching load for the engineering faculty will not be increased as a result of implementing the minor.

6. **Proposed term for implementation:** Spring 2014

7. **Dates of prior committee approvals:**

Engineering Department/Division: 4/30/13

Ogden College Curriculum Committee 10/10/13

Professional Education Council (if applicable) n/a

General Education Committee (if applicable) n/a

Undergraduate Curriculum Committee Thursday, Oct 24th, 2013

University Senate

Attachment: Program Inventory Form

Proposal Date: January 28, 2013

**Potter College of Arts and Letters
Department of Sociology
Proposal to Create a New Major Program
(Action Item)**

Contact Person: Doug Smith, douglas.smith@wku.edu, 270-745-3750

1. Identification of program:

- 1.1 Program title: Criminology
- 1.2 Degree Type: Bachelor of Arts (B.A.)
- 1.3 Classification of Instructional Program Code (CIP): 45.0401
- 1.4 Required hours in proposed major program: 34
- 1.5 Special information: Students pursuing a major in criminology must select a minor or second major. However, students majoring in criminology may not have a second major in sociology.
- 1.6 Program admission requirements: Admission to Western Kentucky University
- 1.7 Catalog description: The Criminology program will provide graduates with detailed knowledge of the etiology of criminal offending, victimization, and societal reactions to crime. This program provides the skill sets necessary for a variety of vocations, including social services, non-profit, governmental, and public and private research agencies at the local, state, national or international level. The major in criminology requires a minimum of 34 semester hours and leads to a Bachelor of Arts degree. Students majoring in criminology must select a minor or second major. However, students majoring in criminology may not have a second major in sociology.

Students can work with an advisor to develop an individualized program to fit his or her personal interests in selecting elective courses. Students are strongly encouraged to take CRIM 231: Introduction to Criminal Justice during the first year of study, as it serves as a foundational course for higher level criminology courses. The following table contains the suggested sequence of courses:

Sample Four-Year Program of Study for the Criminology Major			
		Courses	Hours
Freshman Year	Fall	CRIM 231	3
	Spring	CRIM elective	3
Sophomore Year	Fall	CRIM 330	3
	Spring	SOCL 300 Select from SOCL 309, CRIM 332 or CRIM 380	3 3
Junior Year	Fall	SOCL 302 Select from SOCL 309, CRIM 332, or CRIM 380	3 3

	<i>Spring</i>	Select from SOCL 309, CRIM 332 or CRIM 380 CRIM elective	3 3
Senior Year	<i>Fall</i>	CRIM elective CRIM elective	3 3
	<i>Spring</i>	CRIM 499	1
Total Hours for Criminology Major			34

2. **Rationale:**

- 2.1 Reason for developing the proposed major program:
Criminology bachelor's degree programs are in high demand, with the number of criminology graduates more than doubling between 1998 and 2008 (*ASA Task Force*, 2010). The *Occupational Outlook Handbook* expects slightly better than average growth rate in this field between 2010 and 2020. The department of sociology currently houses a criminology minor and a criminology Master's degree program, yet does not offer a criminology major degree program. The proposed major will fill this noticeable gap. Moreover, the Commonwealth university system does not offer a bachelor's degree program in criminology. The current minor in criminology has attracted a large number of students to the department. As of the fall of 2012, 392 students have a declared minor in criminology, and student demand for a major in criminology is high. The proposed program will meet this demand.

By combining the theoretical examination of various individual, social, and structural variables related to crime in society with a firm understanding of basic research methodologies and data analysis, graduates from the proposed major program will have the skills necessary to analytically examine social problems with a firm understanding of issues of inequality and diversity - abilities that are increasingly necessary in a changing society. Moreover, shifting economic conditions have reduced the overall budgets of a variety of criminal justice and social service agencies and agency leaders are increasingly requiring that employees have research and data analysis skills, as well as a firm understanding of human and social behavior that can be related to the prevention and management of criminal behavior and victimization through the development of innovative policy solutions to more efficiently respond to the crime problem. Students graduating from the proposed program will be qualified for a variety of vocations with various agencies, including social, non-profit, governmental, and research agencies across the Commonwealth or at the national or international level.

Criminology as a distinct discipline emerged directly from the sociological examination of cultural influences and structural forces within the social environment and their influence on criminality. Criminology programs provide students not only with basic system level knowledge, but also a strong command of research methodologies and the direct application of empirically derived theoretical principles into practical solutions to the crime problem. Compared to traditional criminal justice programs, criminology has a strong inter-disciplinary

focus derived from its origins within the field of sociology. As such criminology draws its strength from the sociological examination of social systems and behavior, social inequality, and social justice by applying these core issues directly to a theoretically grounded examination of the etiology of criminal offending, victimology, and broader implications for society.

Criminology and criminal justice, though related fields differ markedly in their substantive focus, with criminology having a longer historical traditional and inter-disciplinary nature. Criminology as a field of study traces its roots to the earliest studies of crime with most courses on criminological theory beginning with a discussion of early philosophers and contract theorists, such as Hobbes, Bentham, and Beccaria. Criminal justice programs arose later in history as a direct response to calls to increase professionalism within various criminal justice agencies in the 1960s. Criminal justice programs have historically been oriented around a practical, real-world systems approach to the various components of the criminal justice system, namely the police, courts, and corrections. Criminology programs adopt a scientific examination of the causes and correlates of crime and societal reactions to crime and deviance, strongly grounded in critical thinking, theoretical knowledge, and sound methodology. While criminal justice programs usually focus on vocational knowledge in the fields of policing, corrections or other system-specific criminal justice occupations, criminology takes as its focus a critical examination on issues of inequality within the criminal justice system, alternatives to incarceration, the evolving definitions of deviance, or social forces leading to changes in the law or society's reaction to offending. Though changes in the criminal justice system have traditionally informed criminological research, criminology provides a critical examination of broader questions such as what biological, psychological, and sociological factors affect criminal propensity and how theoretical knowledge can be directly applied to develop sound preventative policies and theoretically informed solutions to the crime problem. The proposed program will prepare graduates to contribute to this effort.

2.2 Projected enrollment in the proposed major program: From 2010 to 2012, the sociology department graduated 379 students with a declared minor in criminology. It is expected, that given the option, a portion of these minors in criminology would choose to major in criminology. Benchmark institutions with a criminology major or combined criminology/criminal justice major were contacted and the institutions that responded provided the following enrollment estimates:

- Ball State University: 600
- California State University - Fresno: 1600
- Indiana State University: 777
- Missouri State University: 550
- Northern Arizona University: 811
- University of Northern Iowa: 335

Given the above figures and the popularity of criminology as a major at other institutions it is reasonable to expect approximately 70 to 80 new majors each year.

2.3 Relationship of the proposed major program to other programs now offered by the department:

The department of sociology currently has an existing criminology minor and a Master's program. The proposed major program will fill the void between these two programs and likely increase enrollment in the current Master's program.

As stated in section 2.1, criminology as a discipline arose directly from the field of sociology, and examinations of the etiology of crime and society's response to it are intricately tied to core sociological concepts. The proposed major program in criminology will be a natural companion to the existing sociology major program by applying the sociological mindset and examination of individual and collective experience specifically to a concentrated study of the crime problem and the social institutions designed to control it. This will provide students with a more inter-disciplinary experience than traditional criminal justice programs. As stated in a report released by the American Sociological Association (ASA), criminology is the most frequent minor, concentration, or second major housed within a sociology department.

2.4 Relationship of the proposed major program to other university programs:

There is currently no major program in the university that allows students to focus exclusively on theories of criminal offending, variations in victimization, or social reactions to criminal offending. However, criminology programs usually have an inter-disciplinary focus and this trend is maintained by the proposed major program not only through the inclusion of sociology electives, but also courses in the areas of history, psychology, political science and other disciplines. The proposed major program will not overlap with existing majors outside the sociology department and simply extends the current structure and focus of the existing criminology minor program. However, it will allow students interested in social responses to crime to pursue a major reflective of this interest.

2.5 Relationship of the proposed major program to similar programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):

Criminology is a fast-growing major. From 1998 to 2008, the number of bachelor's degrees in criminology more than doubled growing from 2,789 degrees conferred in 1998 to 5,750 in 2008 (*ASA Task Force*, 2010). These numbers do not include bachelor's degrees in related fields, such as criminal justice or justice administration. The growing demand for this program is reflected in the number of benchmark institutions that have a crime-related major program (see below); only Eastern Illinois University does not offer a similar major program, though a minor in criminology is available. However, only California State University - Fresno, Missouri State University, and University of Northern Iowa have stand alone bachelor's degrees in criminology, with Ball State University, Eastern Michigan University, Indiana State University, and Northern Arizona University offering a bachelor's degree in 'criminology and criminal justice'. Some form of crime-related bachelor's degree program is also offered at California State University - Chico (*Criminal Justice*); Central Missouri State University (*Criminal Justice*); Florida Atlantic University (*Criminal Justice*); Middle

Tennessee State University (*Criminal Justice Administration*); Montclair State University (*Justice Studies*); Oakland University (*Criminal Justice*); Stephen F. Austin State University (*Criminal Justice*); Towson University (*Criminal Justice*); Western Illinois University (*Law Enforcement and Justice Administration*); Wichita State University (*Criminal Justice*); and Youngstown State University (*Applied Science in Criminal Justice*).

Eastern Kentucky University does have a bachelor of science program in criminal justice and police studies. However, the criminal justice program at ECU aims to provide students with a “foundation for employment opportunities within the criminal justice field”. The major program proposed here and outlined elsewhere in this proposal has a much broader focus that will allow students to translate their skills to careers outside traditional criminal justice institutions.

2.6 Relationship of the proposed major program to the university mission and objectives:

The proposed criminology major program serves the university mission and objectives and prepares graduates to be “productive, engaged, and socially responsible” by encouraging students to think critically about the crime problem in American society and assist in the development of meaningful solutions that are sensitive to issues of social justice and inequality. The criminology program has a core focus on enhancing students’ theoretical understanding of the etiology of crime while developing sound research and analytical skills that are integral to providing innovative solutions to the crime problem in society. The program will prepare students for entrance into a variety of professional fields within the Commonwealth at the local and state levels, as well as the federal and international level within the criminal justice system, governmental agencies, research institutions and non-profit agencies, while providing them with a strong foundation for lifelong learning through graduate study in criminology and related fields.

3. Objectives of the proposed major program:

Similar to the existing sociology major, the proposed criminology major and coursework are designed to further awareness and understanding of social causes and consequences of human behavior, including criminal offending, victimization, and the social forces that influence society’s reaction to these phenomena. The proposed major program is not intended to provide practice-oriented or vocational knowledge that is appropriately left to in-service training provided by occupational specific agencies. Instead the proposed major program is intended to provide graduates with a broader background more readily applicable to a variety of career fields. The program will provide graduates with a strong skill set enabling them to approach problems methodologically, combined with the critical and analytical reasoning necessary to developing innovative solutions to crime as a social problem within an increasingly diverse society. In keeping with the overall mission of the sociology department, the proposed major in criminology will provide students with the ability to discuss the crime problem from an empirically based and theoretically sound perspective that allows them to see beyond stereotypes and

convenient slogans, frame and solve problems realistically and communicate these solutions to a variety of audiences both orally and in writing.

4. Program description:

4.1 Curriculum:

The major in criminology requires a minimum of 34 semester hours. Students majoring in criminology must select a minor or second major. However, students majoring in criminology may not have a second major in sociology.

The following core courses are required for a major (22 credit hours):

- CRIM 231: Introduction to Criminal Justice (3 hours)
- SOCL 300: Using Statistics in Sociology (3 hours)
- SOCL 302: Strategies of Social Research (3 hours)
- SOCL 309: Social Deviance (3 hours)
- CRIM 330: Criminology (3 hours)
- CRIM 332: Juvenile Delinquency (3 hours)
- CRIM 380: Penology (3 hours)
- CRIM 499: Senior Seminar (1 hour)

Students are required to take an additional 12 hours of elective courses, selecting from the following:

- CRIM 232: Introduction to Law Enforcement
- CRIM 233: Alternatives to Confinement
- CRIM 361: Race, Class, and Crime
- CRIM 432: Sociology of Criminal Law
- CRIM 434: Organized Crime
- CRIM 437: The Death Penalty in America
- CRIM 438: Victimology
- CRIM 439: Internship in Criminology
- CRIM 446: Gender, Crime and Justice
- CRIM 451: White Collar Crime
- SOCL 359: Sexuality & Society
- SOCL 435: Family Violence
- PS 220: Judicial Process
- PS 326: Constitutional Law
- PS 328: Criminal Justice
- PS 350: Political Terrorism
- HIST 445: American Legal History to 1865
- HIST 446: American Legal History Since 1865
- SWRK 356: Services to Juvenile Offenders
- PSY 440: Abnormal Psychology
- PSY 441: Aspects of Alcoholism
- PSY 470: Psychology and the Law
- CHEM 430: Forensic Chemistry

- PH 165: Drug Abuse
- ANTH 300: Forensic Anthropology

- 4.2 Accreditation, certification, approval, and/or licensure: Not applicable.
- 4.3 Program delivery: The curriculum for the proposed major is composed of courses already taught under the existing minor in criminology. The courses will continue to be offered primarily in the classroom with additional courses offered online or through independent learning.

5. Resources:

- 5.1 Faculty:
Currently the sociology department has faculty members who teach exclusively within the existing criminology minor program, as well as faculty members who teach within both the sociology major and criminology minor. As the proposed major is comprised of courses already taught within the existing criminology minor, under the current course rotation, the department believes that staffing is sufficient for the initial implementation of the program on the main campus. However, if the proposed major grows substantially over time an additional faculty line will be necessary to support that growth. If the proposed major is extended to the regional campuses an additional faculty line is necessary to support that extension at the time of implementation.
- 5.2 Technological and electronic informational resources (e.g., databases, e-journals)
Current resources that exist in support of the criminology minor are sufficient to support the proposed criminology major.
- 5.3 Facilities and equipment:
The resources that exist in support of the criminology minor are sufficient to support the proposed criminology major. However, if this program grows beyond expectations, the department might need to request additional resources and faculty lines to support that growth.

6. Proposed term for implementation: Fall 2014

7. Dates of prior committee approvals:

Sociology Department/Division:	February 15, 2013
Potter College Curriculum Committee	March 7, 2013
Contact with Office of Academic Affairs re: CPE Posting	_____
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	_____

Proposal Date: April 9, 2013

**Ogden College of Science and Engineering
Department of Engineering
Proposal to Create a New Course
(Action Item)**

Contact Person: Stacy Wilson; stacy.wilson@wku.edu; 745-5848

1. Identification of proposed course:

- 1.1 Course prefix (subject area) and number: ENGR 400
- 1.2 Course title: Principles of Systems Engineering
- 1.3 Abbreviated course title: Systems Engineering
- 1.4 Credit hours: 3 credit hours
- 1.5 Type of course: A – Applied Learning
- 1.6 Prerequisites: Junior standing in an engineering discipline; and EE 210 or EM 221, or EM 222 and STAT 301
- 1.7 Course catalog listing: An overview of the field and relevant principles of systems engineering. Topics will prepare students to apply systems engineering theory to the solution of complex system-based engineering problems.

2. Rationale:

- 2.1 Reason for developing the proposed course:
Systems engineering is an iterative approach to problem solving that examines all stages of a system's life cycle: design/development, production/construction, operation/maintenance, and retirement/disposal. Systems engineers develop high-quality, cost-effective solutions that meet the needs of their customers. NASA has identified systems engineering as "a critical core competency in enabling current and future mission success"
(<http://www.nasa.gov/offices/oce/appel/seldp/index.html>).
The importance of understanding systems engineering principles and practices is becoming widely known in the engineering community. This course is the foundation course for the systems engineering minor.
- 2.2 Projected enrollment in the proposed course: 10-15 students per offering.
The primary constituents of this program initially will be majors in civil, electrical and mechanical engineering. It is projected that approximately 25 students will participate in the systems engineering minor per year. This estimate is determined by anticipating that 40% of a cohort of students will enroll in the minor each year. The percentage used in this estimation was determined by examining the number of students who enrolled in the initial offering of the principles of systems engineering course in the fall 2012 and summer 2013. Each student participating in the minor will be required to enroll in this course.

- 2.3 Relationship of the proposed course to courses now offered by the department:
There are no similar courses currently offered in the department. However, this course will complement the design courses offered in each program.
- 2.4 Relationship of the proposed course to courses offered in other departments:
There are no other similar courses offered in other departments.
- 2.5 Relationship of the proposed course to courses offered in other institutions:
Data available from INCOSE (International Council on Systems Engineering) indicates growth in systems engineering programs, with the number of masters programs in systems engineering growing faster in comparison to the number of undergraduate and doctoral programs. For example, within the USA there are currently 13 Bachelor of Science, 41 Master of Science, and 14 PhD programs that include the words “systems engineering” in their title. However, an infusion of systems thinking and limited exposure to systems engineering principles is beginning to appear in many undergraduate engineering curricula. Within the WKU engineering programs, the use of scenario- or project-based education and team projects has been its cornerstone since inception. These experiences provide the opportunity for students to apply “systems engineering” to real-world problems.

3. Discussion of proposed course:

- 3.1 Course objectives: The objective of this course provides the student with an introduction to systems engineering principles. The course is also intended to prepare the student for their capstone design course. Additional learning objectives include:
- to develop a systems engineering perspective of how complex systems are conceived;
 - to establish and increase the knowledge and comprehension of the value and purpose of systems engineering;
 - to establish a working knowledge of methods and tools systems engineers use; and
 - to understand the roles of systems engineers and gain the ability to contribute to the development of complex systems.
- 3.2 Content outline:
- The systems engineering process
 - Requirements
 - Design fundamentals
 - Subsystem fundamentals
 - Trade studies
 - Integration
 - Technical reviews
 - Case studies and ethics

- 3.3 Student expectations and requirements:
Student performance might be assessed using some of the following methods:
examinations, papers, and presentations.
- 3.4 Tentative texts and course materials:
Systems Engineering and Analysis, Benjamin S. Blanchard and Wolter J.
Fabrycky, Prentice Hall, 5th Edition, 2011.
- 4. Resources:**
- 4.1 Library resources: See attached library resources form.
- 4.2 Computer resources: The course will use computer resources that are currently
available to students in the Department of Engineering.
- 5. Budget implications:**
- 5.1 Proposed method of staffing: Current faculty and staff in the Department of
Engineering will be used to staff the course. The civil, electrical and mechanical
engineering programs require technical elective courses. It is intended that this
course will also be periodically offered as technical elective courses in these
programs so that there will be no additional teaching load required during the
academic year. It is also anticipated that this course will be offered during the
summer term.
- 5.2 Special equipment needed: none
- 5.3 Expendable materials needed: none
- 5.4 Laboratory materials needed: none
- 6. Proposed term for implementation:** Spring 2014
- 7. Dates of prior committee approvals:**

Engineering Department	<u>4/30/13</u>
OSCE Curriculum Committee	<u>10/10/13</u>
Undergraduate Curriculum Committee	<u>Thursday, Oct 24th, 2013</u>
University Senate	<u></u>

Attachment: Bibliography, Library Resources Form, Course Inventory Form