MEMORANDUM TO: Ogden College of Science and Engineering Curriculum Committee

Dr. Jack Rudolph	Dr. James Gary	Dr. Keith Sylvester
Dr. Martin Stone	Dr. Huanjing Wang	Dr. John Khouryieh
Dr. Bruce Schulte	Dr. Julie Ellis	Dr. Bruce Kessler
Dr. Scott Grubbs	Dr. Warren Campbell	Dr. Attila Por
Dr. Cathleen Webb	Dr. David Keeling	Dr. Keith Andrew
Dr. Hemali Rathnayake	Dr. Xingang Fan	Dr. Lou Strolger
Dr. Les Pesterfield		

FROM: Kenneth Crawford, Chair

SUBJECT: Agenda for <u>Thursday, February 4, 2013</u>, 3:45 p.m. in COHH 4123

A. OLD BUSINESS:
I.   Consideration of the minutes of the December 6, 2012, meeting.

B. NEW BUSINESS:

Action Items

I. **Department of Agriculture**
1.   Proposal to Make Multiple Revisions to a Course
     a. AGRO 317, Plant Pathology, 3 hrs.

III. **Department of Architectural and Manufacturing Sciences**
1. Proposal to Revise a Program
     a. Ref. #533, Major in Construction Management, 71 hrs.

II. **Department of Mathematics**
1. Proposal to Revise a Program
     a. Ref. #731, Mathematical Economics, 49-62 hrs.

C. OTHER BUSINESS

Minutes – OCSE Curriculum Committee   **February 4, 2013**

MEMBERS PRESENT:

Dr. Scott Grubbs	Dr. Warren Campbell
Dr. Cathleen Webb	Dr. David Keeling
Dr. Hemali Rathnayake	Dr. Xingang Fan
Catherine Poteet for Dr. Les Pesterfield	Dr. Mark Robinson
Dr. James Gary	Dr. Attila Por
Dr. Huanjing Wang	Dr. Keith Andrew
Dr. Julie Ellis	Dr. Lou Strolger

FROM: Bruce Kessler, Chair

OLD BUSINESS:

Keeling/Grubbs moved approval of the minutes from the December 6, 2012, meeting. Motion passed.

NEW BUSINESS:

Consent Items

No motion made to move any items from consent agenda to action agenda. Consent agenda was accepted as presented on a Keeling/Campbell motion.

Action Items

Department of Agriculture
Keeling/Grubbs moved to table the proposal to Make Multiple Revisions to a Course, AGRO 317, Planet Pathology, to the next meeting as no Agriculture representative was present.

Department of Engineering
Keeling/Campbell moved approval of the proposal to Create a New Course, CE 301, Field Experience in Floodplain Management. Motion passed.

Keeling/Ellis moved approval of the proposals to Create a New Course, ME 332, Fluid Mechanics Laboratory an ME 333, Heat Transfer Laboratory as one item. Motion passed.

Keeling/Campbell moved approval of the proposal to Make Multiple Revisions to a Course, ME 176, Mechanical Engineering Freshman Design. Motion passed.

The following items should have been on the Consent Agenda:

Keeling/Campbell moved approval of the proposal to Revise Course Prerequisites/Corequisites, ME 180, Freshman Design II. Motion passed.

Keeling/Campbell moved approval of the proposal to Revise Course Prerequisites/Corequisites, ME 220, Engineering Thermodynamics. Motion passed.

Keeling/Campbell moved approval of the proposal to Revise Course Prerequisites/Corequisites, ME 300, Junior Design. Motion passed.

Keeling/Campbell moved approval of the proposal to Revise Course Prerequisites/Corequisites, ME 330, Fluid Mechanics. Motion passed.

The following are Action agenda items:

Keeling/Campbell moved approval of the proposal to Revise a Program, Ref. #361, Minor in Floodplain Management. Motion passed.

Keeling/Campbell moved approval of the proposal to Revise a Program, Ref. #543, Mechanical Engineering. Motion passed.

OTHER BUSINESS

No other business. Meeting was adjourned until 4:32 p.m.

Ogden College of Science
Department of Agriculture
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: Naomi Rowland, naomi.rowland@wku.edu, 270-745-6931

1.   Identification of course:
      1.1   Current course prefix (subject area) and number: AGRO 317
      1.2   Course title: Plant Pathology
      1.3   Credit hours: 3

2.   Revise course title: N/A
      2.1   Current course title:
      2.2   Proposed course title:
      2.3   Proposed abbreviated title:
      2.4   Rationale for revision of course title:

3.   Revise course number: N/A
      3.1   Current course number:
      3.2   Proposed course number:
      3.3   Rationale for revision of course number:

4.   Revise course prerequisites/corequisites/special requirements:
      4.1   Current prerequisites/corequisites/special requirements: none
      4.2   Proposed prerequisites:AGRO 110 or permission of instructor
      4.3   Rationale for revision of course prerequisites: Students are better able to
understand the study of plant disease when they have had exposure to basic plant science.
      4.4   Effect on completion of major/minor sequence: none

5.   Revise course catalog listing:
      5.1   Current course catalog listing: Symptoms, causes and control of some of the more
                      representative plant diseases. Methods of control will be stressed. Lecture, two
                       hours; laboratory, two hours.

      5.2   Proposed course catalog listing: Introduction to common plant pathogens and
                       diseases of agronomically important field and forage crops, turf, vegetables and
                       ornamentals. Topics include control measures, newly discovered diseases and
                       plant/pathogen interactions.
      5.3   Rationale for revision of course catalog listing: Agro 317 is being offered now
                       after not being taught for several years. The faculty wishes to provide a more
                       detailed and updated description of the content.

6.   Revise course credit hours: N/A

6.1   Current course credit hours:
6.2   Proposed course credit hours:
6.3   Rationale for revision of course credit hours:

7.   Proposed term for implementation: Fall 2013

8.   Dates of prior committee approvals:

Agriculture Department: _____

OCSE Curriculum Committee   _____

Undergraduate Curriculum Committee   _____

University Senate   _____

Attachment: Course Inventory Form

COURSE INVENTORY FORM

☒ **Course Revisions**

Note: **If course revision affects subject area, course number, or course title, complete both #1 and #2, and any other proposed changes.**
If course revision does not affect subject area, course number, or course title, complete #1, and any proposed changes ONLY.

1. **Identification of Existing Course** **Existing Subject Area** AGRO

   Existing Course Number 317

   Existing Course Title PLANT PATHOLOGY

2. **Identification of Proposed Course** **Proposed Subject Area** ☐

   Proposed Course Number ☐

   Proposed Official Course Title ☐

   Proposed Abbreviated Title ☐

3. **First effective term for course revision** (e.g. Spring 2012=201210, Fall 2012=201230) 201310

4. **Offering Unit** (See Table of Code Values.)   College SC   Department AGRI

Course Revisions: Check box at left and complete only those items that are being changed. Leave other items blank.

☐ 5. **Credit Hours** Fixed Credit Hours: ☐ Variable Credit Hours ☐ ☐ ☐

☐ 6. **Repeat Limit** (See instructions.) ☐ **Total Maximum Hours** (See instructions.) ☐

☐ 7. **Grading** (Check all that apply.) ☐ Standard Letter Grading ☐ Pass/Fail Only ☐ No Grade
        ☐ In Progress – IP (course is intended to span more than one term)

☐ 8. **Schedule Type** (See Table of Schedule Types.) ☐ ☐ ☐

☐ 9. **Corequisites** (courses required to be taken **concurrently** with this course)

Subject Area	Course Number	Subject Area	Course Number	Subject Area	Course Number
☐	☐	☐	☐	☐	☐

☐ 10. **Equivalent Courses** (Include South Campus [C suffix] courses and other equivalent courses.)

Subject Area	Course Number	Subject Area	Course Number	Subject Area	Course Number
☐	☐	☐	☐	☐	☐

☒ 11. **Prerequisites** (See instructions.)

Subject Area	Course Number	Subject Area	Course Number	Subject Area	Course Number
AGRO	110 ☐	☐	☐	☐	☐

        ☐ Other ☐

☐ 12. **Course Attribute** ☐ Honors Course ☐ Developmental Course

☐ 13. **Course Restrictions** ☐ Include/☐ Exclude College ☐ College ☐ Major ☐ Major ☐ Classification ☐

☒ 14. **Course Description** (Indicate exactly as it should appear in the University Catalog. Include pertinent special information, e.g., course fees, pass/fail grading, field trips, transportation requirements, etc.)
        Introduction to common plant pathogens and diseases of agronomically important field and forage crops, turf, vegetables and ornamentals. Topics include control measures, newly discovered diseases and plant/pathogen interactions.

Office of the Registrar Use
UCC_____   University Senate _____   CIP_____   Course Desc_____

Ogden College of Science and Engineering
Department of Architecture and Manufacturing Sciences
Proposal to Revise A Program
(Action Item)

Contact Person: Ahmed Khalafallah, ahmed.khalafallah@wku.edu , phone 745-5949

1. **Identification of program:**
   1.1   Current program reference number: 533
   1.2   Current program title: Major in Construction Management
   1.3   Credit hours: 71

2. **Identification of the proposed program changes:**
   ▪ Replace the required course AMS 430 with MGT 210

3. **Detailed program description:**

Current Program			Proposed Program		
Program Description: The following courses are required for the major:			**Program Description**: The following courses are required for the major:		
Major in Construction Management			*Major in Construction Management*		
Course #	Course Title	Hrs	Course #	Course Title	Hrs
AMS 140	Intro to Occupational Safety	1	AMS 140	Intro to Occupational Safety	1
AMS 163	Architectural Drafting	3	AMS 163	Architectural Drafting	3
AMS 261	Construction Methods & Materials	3	AMS 261	Construction Methods & Materials	3
AMS 262	Construction Laboratory	1	AMS 262	Construction Laboratory	1
AMS 271	Industrial Statistics	3	AMS 271	Industrial Statistics	3
AMS 325	Survey of Building Systems	3	AMS 325	Survey of Building Systems	3
AMS 398	Internship I	1	AMS 398	Internship I	1
AMS 430	Tech. Mgmt./Supervision/Team Bldg.	3			
AMS 490	Senior Research	3	AMS 490	Senior Research	3
AMS 282	Architectural Structures	3	AMS 282	Architectural Structures	3
CM 250	Contract Documents	3	CM 250	Contract Documents	3
CM 337	Applied Strength of Materials	3	CM 337	Applied Strength of Materials	3
CM 346	Applied Soil Mech. & Foundations	3	CM 346	Applied Soil Mech. & Foundations	3
CM 363	Construction Estimating & Bidding I	3	CM 363	Construction Estimating & Bidding I	3
CM 400	Construction Administration	3	CM 400	Construction Administration	3
CM 426	Construction Law	3	CM 426	Construction Law	3
CM 462	Construction Scheduling	3	CM 462	Construction Scheduling	3
CM 463	Construction Estimating & Bidding II	3	CM 463	Construction Estimating & Bidding II	3

CE 160	Surveying I	3	CE 160	Surveying I	3
CE 161	Surveying I Lab	1	CE 161	Surveying I Lab	1
CE 303	Construction Management	3	CE 303	Construction Management	3
CE 304	Construction Management Lab	1	CE 304	Construction Management Lab	1
CE 316	Equipment & Methods	3	CE 316	Equipment & Methods	3
ACCT 200	Introductory Accounting Financial	3	ACCT 200	Introductory Accounting Financial	3
ACCT 201	Introductory Accounting Managerial	3	ACCT 201	Introductory Accounting Managerial	3
			MGT 210	**Organization and Management**	**3**
MGT 301	Business Law	3	MGT 301	Business Law	3
MGT 311	Human Resources Management	3	MGT 311	Human Resources Management	3
Total Hours in Major		71	Total Hours in Major		71
Students are also required to take the following additional courses outside of the major:			Students are also required to take the following additional courses outside of the major:		
AMS 175	University Experience	2	AMS 175	University Experience	2
CIS 141	Basic Computer Literacy	3	CIS 141	Basic Computer Literacy	3
ENG 100	Freshman English	3	ENG 100	Freshman English	3
ENG 200	Introduction to Literature	3	ENG 200	Introduction to Literature	3
ENG 300	Junior English	3	ENG 300	Junior English	3
COMM 161	Public Speaking Elective	3	COMM 161	Public Speaking Elective	3
PHIL 320	Ethics	3	PHIL 320	Ethics	3
HIST 119 (120)	Western Civ. to (since) 1648	3	HIST 119 (120)	Western Civ. to (since) 1648	3
ECON 150 (202)	Introduction to Economics (Principles of Economics - Micro)	3	ECON 150 (202)	Introduction to Economics (Principles of Economics - Micro)	3
CHEM 106	Fund of Gen Chem Lab	1	CHEM 106	Fund of Gen Chem Lab	1
CHEM 116	Intro to College Chemistry	3	CHEM 116	Intro to College Chemistry	3
PHYS 201	College Physics I	4	PHYS 201	College Physics I	4
SFTY 171	Safety and First Aid	1	SFTY 171	Safety and First Aid	1
and 6 hours of advisor approved electives; these courses may fulfill general education requirements.		**6**	**and 3 hours of advisor approved electives; these courses may fulfill general education requirements.**		**6**
Total Other Additional Hours		41	Total Other Additional Hours		41

4. **Rationale for the proposed program change:**
   - The curriculum of the Construction Management program lacks coverage of important Business Management topics, including organizational theory and behavior. MGT 210 has been identified as an essential course to address this weakness in the program. The course focuses on managing people and material resources to enhance organizational efficiency and productivity.
   - The above weakness has also been pointed out through a program review by ACCE and this should address their concern.

5. **Proposed term for implementation and special provisions (if applicable):** 201330

6.   Dates of prior committee approvals:

AMS Department: __01/31/2013_____

Ogden College Curriculum Committee   _____

Undergraduate Curriculum Committee   _____

University Senate   _____

Gordon Ford College of Business
Ogden College of Science and Engineering
Department of Economics
Department of Mathematics
Proposal to Revise A Program
(Action Item)

Contact Person for Economics: Catherine Carey, cathy.carey@wku.edu, 5-6401
Contact Person for Mathematics: Melanie Autin, melanie.autin@wku.edu, 5-6171

1.   **Identification of program:**
       1.1   Current program reference number: 731
       1.2   Current program title: Mathematical Economics
       1.3   Credit hours: 49-62

2.   **Identification of the proposed program changes:**
       The program has been altered to include two concentrations: General Mathematical
       Economics and Actuarial Science.
       • The General Mathematical Economics Concentration is identical to the current
          program.
       • The Actuarial Science Concentration is a package of courses chosen to prepare
          students to take (at least) the first two actuary exams and to pursue a career as an
          actuary.
       • Neither concentration will require a second major or minor.

3.   **Detailed program description:**

Current Program	**Proposed Program**
Program Description (page 115 and page 173 of current WKU catalog)	New Program Description
The major in Mathematical Economics (reference number 731) requires **27 hours in Economics, 21 hours in Mathematics, and 1 hour of an interdisciplinary senior seminar course.** This major leads to a Bachelor of Science degree intended for students interested in graduate studies in economics, public policy, or business, as well as those students seeking analytical careers that will require extensive mathematics backgrounds.	The major in Mathematical Economics (reference number 731) requires a core of **18 hours in Economics, 15 hours in Mathematics, and 1 hour of an interdisciplinary senior seminar course. The concentration in General Mathematical Economics requires an additional 9 hours in Economics and 6 hours in Mathematics. The concentration in Actuarial Science requires an additional 3 hours in Economics, 9 hours in Mathematics, 12 hours in Finance, and 3-4 hours in Computer Science.** This major leads to a Bachelor of Science degree intended for students interested in graduate studies in economics, public

policy, or business, as well as those students seeking **a career as an actuary or** analytical careers that will require extensive mathematics backgrounds.

The program of study requires completion of a second major or a minor. The second major may not be economics, business economics, or mathematics. The minor may not be economics or mathematics.

The program of study does not require completion of a second major or minor.

All majors must complete a 40-hour core consisting of ECON 202, 203, 206 (or STAT 301), 302, 303, 306 or 307, 464, 465; MATH 136, 137, 237, 307; and ECON 497 or MATH 497. Additionally, either MATH 331 or 310 must be completed, and students must take three additional hours from either MATH 331, 310, 305, 382, 435, or 405. The remaining 3 hours in economics for completion may be selected from other 300 and 400 level economics courses.

All majors must complete a 34-hour core consisting of ECON 202, 203, 206 (or STAT 301), 302, 303, 465; MATH 136, 137, 237, 307; and ECON 497 or MATH 497. Additionally, majors must choose a concentration in either General Mathematical Economics or Actuarial Science. Majors in the General Mathematical Economics concentration must complete ECON 306 or 307, and ECON 464. Additionally, either MATH 331 or 310 must be completed, and students must take three additional hours from either MATH 331, 310, 305, 382, 435, or 405. The remaining 3 hours in economics for completion may be selected from other 300- and 400-level economics courses. Majors in the Actuarial Science concentration must complete ECON 307; MATH 310, 382 and 482; FIN 330, 337, 350, and 437; and CS 170 or 180.

Admission to the mathematical economics major requires (1) the completion of MATH 136, ECON 202 and 203, and ECON 206 or STAT 301 with a minimum GPA of 2.0 in the courses listed; and (2) completion of a minimum of 60 hours with a minimum GPA of 2.0 overall; and (3) completion of a minimum of 12 hours at Western Kentucky University with a minimum WKU GPA of 2.0. All mathematical economics majors will be required to enroll in an interdisciplinary senior seminar course prior to graduation (ECON 497 or MATH 497, 1 hour)

Admission to the mathematical economics major requires (1) the completion of MATH 136, ECON 202 and 203, and ECON 206 or STAT 301 with a minimum GPA of 2.0 in the courses listed; and (2) completion of a minimum of 60 hours with a minimum GPA of 2.0 overall; and (3) completion of a minimum of 12 hours at Western Kentucky University with a minimum WKU GPA of 2.0. All mathematical economics majors will be required to enroll in an interdisciplinary senior seminar course prior to graduation (ECON 497 or MATH 497, 1 hour)

Current Program				**Proposed Program**			
Prefix	#	Course Title	Hrs.	Prefix	#	Course Title	Hrs.
ECON	202	Principles of Microeconomics	3	ECON	202	Principles of Microeconomics	3

ECON	203	Principles of Macroeconomics	3	ECON	203	Principles of Macroeconomics	3
ECON or STAT	206 301	Introduction to Statistical Analysis Introductory Probability & Applied Statistics	3	ECON or STAT	206 301	Introduction to Statistical Analysis Introductory Probability & Applied Statistics	3
ECON	302	Microeconomic Theory	3	ECON	302	Microeconomic Theory	3
ECON	303	Macroeconomic Theory	3	ECON	303	Macroeconomic Theory	3
ECON **or** **ECON**	**306** **307**	**Statistical Analysis** **Financial Data Modeling**	**3**				
ECON	**464**	**Mathematical Economics**	**3**				
ECON **or** **ECON**	**465** **480**	**Regression Econometrics** **Economic Forecasting**	**3**	**ECON** **or** **ECON** **or** **STAT**	**465** **480** **401**	**Regression Econometrics** **Economic Forecasting** **Regression Analysis**	**3**
ECON or MATH	497 497	Senior Seminar in Mathematical Economics Senior Seminar in Mathematical Economics	1	ECON or MATH	497 497	Senior Seminar in Mathematical Economics Senior Seminar in Mathematical Economics	1
MATH	136	Calculus I	4	MATH	136	Calculus I	4
MATH	137	Calculus II	4	MATH	137	Calculus II	4
MATH	237	Multivariable Calculus	4	MATH	237	Multivariable Calculus	4
MATH	307	Introduction to Linear Algebra	3	MATH	307	Introduction to Linear Algebra	3
MATH **or** **MATH**	**310** **331**	**Introduction to Discrete Mathematics** **Differential Equations**	**3**				
ECON	**3xx/ 4xx**	**Elective**	**3**				
				Choose one of the following two concentrations:			

				1) General Mathematical Economics			
				ECON or ECON	306 307	Statistical Analysis Financial Data Modeling	3
				ECON	464	Mathematical Economics	3
				ECON	3xx/4xx	Elective	3
				MATH or MATH	310 331	Introduction to Discrete Mathematics Differential Equations	3
Three hours from the following:				**Three hours from the following:**			
MATH	305	**Introduction to Mathematical Modeling**	3	MATH	305	**Introduction to Mathematical Modeling**	3
MATH or MATH	310 331	**Introduction to Discrete Mathematics** **Differential Equations**	3	MATH or MATH	310 331	**Introduction to Discrete Mathematics** **Differential Equations (whichever was not chosen above)**	3
MATH	382	**Probability and Statistics I**	3	MATH	382	**Probability and Statistics I**	3
MATH	405	**Numerical Analysis I**	3	MATH	405	**Numerical Analysis I**	3
MATH	435	**Partial Differential Equations**	3	MATH	435	**Partial Differential Equations**	3
TOTALS				**TOTALS**			
Credit Hours			**49**	**General Mathematical Economics Credit Hours**			**49**
				2) Actuarial Science			
				ECON	307	**Financial Data Modeling**	3
				MATH	310	**Introduction to Discrete Mathematics**	3
				MATH	382	**Probability & Statistics I**	3
				MATH	482	**Probability & Statistics II**	3
				FIN	330	**Principles of Financial Management**	3
				FIN	332	**Investment Theory**	3
				FIN	350	**Risk Management and Insurance**	3

	FIN	437	**Corporate Asset Management**	**3**
	CS or CS	170 180	**Problem Solving and Programming** **Computer Science I**	**3-4**
			TOTALS	
			Actuarial Science Credit Hours	**61-62**

4.   Rationale for the proposed program change:

We often receive requests for a program in Actuarial Science. Actuarial Science is a program that focuses on the mathematical and statistical analysis of risk and its applications to insurance and other business management problems. Bellarmine University has a major in Actuarial Science. The University of Louisville offers a concentration in actuarial science. Eastern Kentucky University offers a minor in actuarial science. According to the BLS Occupational Outlook Handbook, the demand for Actuaries will grow 27% over this decade with a near 0 unemployment rate. While the courses necessary for actuarial preparation are currently offered by the Mathematics, Economics, and Finance Departments, this concentration within the Mathematical Economics major packages the courses specifically for students preparing to become certified actuaries by taking the series of actuarial exams administered by the Society of Actuaries (SOA) or the Casualty Actuarial Society (CAS).

The requirement of a second major or minor is being removed because both concentrations of the Mathematical Economics major require enough hours for it to be a stand-alone major.

5.   Proposed term for implementation and special provisions (if applicable):

Fall 2013

6.   Dates of prior committee approvals:

Economics Department: _____1/18/2013_____

GFCB Curriculum Committee: _____

Mathematics Department: _____1/18/2013_____

OCSE Curriculum Committee   _____

Undergraduate Curriculum Committee   _____

University Senate   _____