**Ogden College of Science and Engineering**

**Office of the Dean**

**745-4449**

**REPORT TO THE UNIVERSITY CURRICULUM COMMITTEE**

Date: September 12, 2013

The Ogden College of Science and Engineering submits the following information and consent items for consideration at the September 2013, UCC meeting.

1. New Business

|  |  |
| --- | --- |
| **Type of item** | **Description of Item & Contact Information** |
| Information | **Create a Temporary Course**ENGR 250, Early Engineering Experiences in IndustryContact: Julie Ellis, julie.ellis@wku.edu, x52461 |
| Information | **Revise Course Prefix (Meteorology)**GEOGContact: Greg Goodrich, gregory.goodrich@wku.edu, x55986 |
| Consent | **Delete a Course**GC 209, Graphical AnalysisContact: Greg Arbuckle, greg.arbuckle@wku.edu, x56592 |
| Consent | **Delete a Course**MT 317, Metal Process IContact: Greg Arbuckle, greg.arbuckle@wku.edu, x56592 |
| Consent | **Revise Course Prerequisites**AMS 120, Basic ElectricityContact: Bryan Reaka, bryan.reaka@wku.edu, x57032 |
| Consent | **Revise Course Prerequisites**AMS 217, Industrial MaterialsContact: Bryan Reaka, bryan.reaka@wku.edu, x57032 |
| Consent | **Revise Course Prerequisites**AMS 328, Robotics & Machine VisionContact: Bryan Reaka, bryan.reaka@wku.edu, x57032 |
| Consent | **Revise Course Prerequisites**AMS 342, Manufacturing OperationsContact: Bryan Reaka, bryan.reaka@wku.edu, x57032 |
| Consent | **Revise Course Prerequisites**AMS 352, Food Processing: Unit OperationsContact: Bryan Reaka, bryan.reaka@wku.edu, x57032 |
| Consent | **Revise Course Prerequisites**AMS 356, Systems Design and OperationsContact: Bryan Reaka, bryan.reaka@wku.edu, x57032 |
| Consent | **Revise Course Prerequisites**AMS 371, Quality AssuranceContact: Bryan Reaka, bryan.reaka@wku.edu, x57032 |
| Consent | **Revise Course Prerequisites**AMS 394, Lean ManufacturingContact: Bryan Reaka, bryan.reaka@wku.edu, x57032 |
| Consent | **Revise Course Prerequisites**AMS 396, Intro Supply Chain ManagementContact: Bryan Reaka, bryan.reaka@wku.edu, x57032 |
| Consent | **Revise Course Number**GEOG 424, Weather Analysis and ForecastingContact: Greg Goodrich, gregory.goodrich@wku.edu, x55986 |
| Consent | Revise Course NumberGEOG 444, Environmental Ethics in GeographyContact: David Keeling, david.keeling@wku.edu, x54555 |

Proposal Date: 25 Aug 2013

**Ogden College of Science and Engineering**

**Department of Engineering**

**Proposal to Create a Temporary Course**

**Information Item: First Offering**

Contact Person: Julie Ellis, julie.ellis@wku.edu, 270.745.2461

1. **Identification of proposed course:**
	1. Course prefix (subject area) and number: ENGR 250
	2. Course title: Early Engineering Experiences in Industry
	3. Abbreviated course title: Engineering in Industry
	4. Credit hours: 3.0
	5. Schedule type: K (Workshop)
	6. Prerequisites: ENG100 and MATH137 and PHYS 255
	7. Grade type: \_\_√\_\_ standard letter grade \_\_\_\_ pass/fail \_\_\_\_in progress (IP)
	8. Course description:
	For students about to transition from an engineering pre-major to an engineering major. Students explore a sequence of industry-based cases illustrating basic engineering principles applied in local engineering sites. Interactions with practicing engineers provide real-world applications of selected topics, while traditional instruction provides basic theory and underlying principles that pertain to the cases. Presentations, teamwork, experimentation, and professional communication are emphasized and practiced. This is a short-term (3 or 4 weeks) Study Away course, with a set program fee. Transportation to the industrial sites is included.
2. **Rationale**
	1. Reason for offering this course on a temporary basis:
	We wish to see whether the concept works and is appealing to students, faculty, and industrial partners. We also wish to determine whether it can be implemented on an ongoing and sustainable basis.
	2. Relationship of the proposed course to courses offered in other academic units:
	There is no other industry-based course like this offered for engineering students, with extensive field experiences. The structure may be readily applicable to other professions and majors in other academic units.
3. **Description of proposed course**
	1. Course content outline
	This course is designed for a 3- or 4-week term and focuses on specific technical concepts and skills that typically are *not* covered in the standard required engineering curriculum, but that *are* used in real industry applications.  Examples include industrial automation, statistical process control, energy management, and the environmental impacts of modern manufacturing. The point is to give students some exposure to the basic concepts of each topic in the form of standard academic instruction plus a real-world application — a case drawn from local industry. Industrial partners are on board to help in developing these cases and in hosting these students in the field experiences.

Students will prepare summative presentations of one concept they have explored more deeply on their own as their final work product. These presentations will be shared with faculty and the industrial partners at a final event near the conclusion of the course.

* 1. Tentative text(s)

***Success through Failure: The Paradox of Design***by [Henry Petroski](http://www.amazon.com/Henry-Petroski/e/B000APOBKA/ref%3Dsr_ntt_srch_lnk_2?qid=1377871841&sr=1-2), Princeton University Press, Aug 7, 2013

Technical resources, both in print and in web form, will be selected when the final topics are chosen.

1. **Second offering of a temporary course (if applicable)** N.A.
2. **Term of Implementation:** Winter 2014, as a Study Away course
3. **Dates of review/approvals:**

|  |  |  |
| --- | --- | --- |
| Department of Engineering  |  | 8/29/13 |
| Dean, Ogden College of Science and Engineering |  | 9/05/13 |

Proposal date: August 19, 2013

**Ogden College of Science and Engineering**

**Department of Geography and Geology**

**Proposal to Revise Course Prefix (Meteorology)**

**(Information Item)**

Contact Person: Greg Goodrich, 745-5986, gregory.goodrich@wku.edu

1. **Identification of current course prefix: GEOG**

 **2. Identification of proposed course prefix: METR**

 **3. Rationale for the prefix revision:** When the B.S. in Meteorology degree was created in 2008, all of the new courses for the program were created under the GEOG prefix. This was done because several courses for the new meteorology degree pre-existed as part of the original B.S. Geography – Land, Weather, Climate track. With the growth and success of the B.S. in Meteorology degree, we want to create the METR prefix to differentiate the meteorology program courses from other courses in the Department of Geography and Geology**.**

 **4. Course numbers to be included under the new course prefix:**

 **GEOG 121**

 **GEOG 122**

 **GEOG 322**

 **GEOG 325**

 **GEOG 422**

 **GEOG 424**

 **GEOG 426**

 **GEOG 431**

 **GEOG 432**

 **GEOG 433**

 **GEOG 437**

 **GEOG 438**

 **GEOG 439**

 **5. Term of implementation: Fall 2014**

 **6. Dates of notification to committees:**

|  |  |
| --- | --- |
| Department of Geography and Geology | 8/21/2013 |
| Ogden College Curriculum Committee  | 9/05/13 |
| General Education CommitteeUndergraduate Curriculum Committee (if applicable) | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| University Senate |  |

Proposal Date: 7/10/13

**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. Current course prefix (subject area) and number: GC 209
	2. Course title: Graphical Analysis
	3. Credit hours: 1.5

**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:**

AMSDepartment/Division: July 11, 2013\_\_\_\_\_\_\_

 Ogden Curriculum Committee September 05, 2013\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 7/10/13

**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. Current course prefix (subject area) and number: MT 317
	2. Course title: Metal Process I
	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:**

AMSDepartment/Division: July 11, 2013\_\_\_\_\_\_\_

 Ogden Curriculum Committee September 05, 2013\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 8-20-2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise Course Prerequisites**

**(Consent Item)**

Contact Person: Bryan Reaka, bryan.reaka@wku.edu 270.745.7032

**1. Identification of course:**

* 1. Course prefix (subject area) and number: AMS 120
	2. Course title: Basic Electricity
	3. Credit hours: 3

**2. Current prerequisites: MATH 118**

**3. Proposed prerequisites: Eligibility for MATH 116**

**4. Rationale for the revision of prerequisites:** MATH 118 is no longer taught by the Math Department. It has been determined that if the student has the appropriate training in functions, graphs and fundamental concepts of algebra, the student will have the prerequisite knowledge to grasp the concepts in AMS 120.

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

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

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

Architectural and Manufacturing Sciences Department \_\_\_\_\_8-21-2013\_\_\_\_\_

 OCSE Curriculum Committee \_\_\_\_\_9-05-13\_\_\_\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 8-20-2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise Course Prerequisites**

**(Consent Item)**

Contact Person: Bryan Reaka, bryan.reaka@wku.edu 270.745.7032

**1. Identification of course:**

* 1. Course prefix (subject area) and number: AMS 217
	2. Course title: Industrial Materials
	3. Credit hours: 3

**2. Current prerequisites: None**

**3. Proposed prerequisites: MATH 116 or Higher**

**4. Rationale for the revision of prerequisites:** Students coming into this class need background in graphs, absolute values, radicals and logarithmic functions in order to better understand the tensile/ compressive properties of materials during the testing procedures that are covered in this course.

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

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

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

Architectural and Manufacturing Sciences Department: \_\_\_\_\_8-21-2013\_\_\_\_\_\_

 OCSE Curriculum Committee \_\_\_\_\_9-05-13\_\_\_\_\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 8-20-2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise Course Prerequisites**

**(Consent Item)**

Contact Person: Bryan Reaka, bryan.reaka@wku.edu 270.745.7032

**1. Identification of course:**

* 1. Course prefix (subject area) and number: AMS 328
	2. Course title: Robotics & Machine Vision
	3. Credit hours: 3

**2. Current prerequisites: AMS 227**

**3. Proposed prerequisites: none**

**4. Rationale for the revision of prerequisites**: Upon review by members of the Industrial Advisory Board, AMS 328 has been deemed to be an in depth course on the topic of robotics and machine vision, and no prior requirements or knowledge other than the ability to do college-level work is needed to matriculate successfully through the course.

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

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

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

Architectural and Manufacturing Sciences Department \_\_\_\_8-21-2013\_\_\_\_\_\_\_

 OCSE Curriculum Committee \_\_\_\_9-05-13\_\_\_\_\_\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 8-20-2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise Course Prerequisites**

**(Consent Item)**

Contact Person: Bryan Reaka, bryan.reaka@wku.edu 270.745.7032

**1. Identification of course:**

* 1. Course prefix (subject area) and number: AMS 342
	2. Course title: Manufacturing Operations
	3. Credit hours: 3

**2. Current prerequisites: AMS 271**

**3. Proposed prerequisites: none**

**4. Rationale for the revision of prerequisites**: Upon review by members of the Industrial Advisory Board, it has been decided that this course does not need the prerequisite skills sets that the AMS 271 (Industrial Statistics) class offers.

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

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

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

Architectural and Manufacturing Sciences Department \_\_\_\_\_8-21-2013\_\_\_\_\_\_

 OCSE Curriculum Committee \_\_\_\_\_9-05-2013\_\_\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 8-20-2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise Course Prerequisites**

**(Consent Item)**

Contact Person: Bryan Reaka, bryan.reaka@wku.edu 270.745.7032

**1. Identification of course:**

* 1. Course prefix (subject area) and number: AMS 352
	2. Course title: Food Processing: Unit Operations
	3. Credit hours: 3

**2. Current prerequisites: AMS 301**

**3. Proposed prerequisites: none**

**4. Rationale for the revision of prerequisites:** This course deals with the techniques of processing in food industries. The current prerequisite deals with the biological aspects of processing which are not necessary for the success of students in AMS 352.

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

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

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

Architectural and Manufacturing Sciences Department: \_\_\_\_\_8-21-2013\_\_\_\_\_\_

 OCSE Curriculum Committee \_\_\_\_\_9-05-13\_\_\_\_\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 8-20-2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise Course Prerequisites**

**(Consent Item)**

Contact Person: Bryan Reaka, bryan.reaka@wku.edu 270.745.7032

**1. Identification of course:**

* 1. Course prefix (subject area) and number: AMS 356
	2. Course title: Systems Design & Operations
	3. Credit hours: 3

**2. Current prerequisites: MATH 118 or MATH 116 or MATH 117 or AMS 271**

**3. Proposed prerequisites: AMS 271**

**4. Rationale for the revision of prerequisites:** MATH 116 is a prerequisite to AMS 271 therefore it does not need to be listed here.

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

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

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

 Architectural and Manufacturing Sciences Department \_\_\_\_\_8-21-2013\_\_\_\_\_\_

 OCSE Curriculum Committee \_\_\_\_\_9-05-2013\_\_\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 8-20-2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise Course Prerequisites**

**(Consent Item)**

Contact Person: Bryan Reaka, bryan.reaka@wku.edu 270.745.7032

**1. Identification of course:**

* 1. Course prefix (subject area) and number: AMS 371
	2. Course title: Quality Assurance
	3. Credit hours: 3

**2. Current prerequisites: MATH 183 or AMS 271**

**3. Proposed prerequisites: None**

**4. Rationale for the revision of prerequisites:** AMS 371 is a qualitative course dealing with quality organizations and standards. The statistical prerequisites courses are not needed for students to understand the structure of the course material.

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

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

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

Architectural and Manufacturing Sciences Department \_\_\_\_\_8-21-2013\_\_\_\_\_\_

 OCSE Curriculum Committee \_\_\_\_\_9-05-13\_\_\_\_\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 8-20-2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise Course Prerequisites**

**(Consent Item)**

Contact Person: Bryan Reaka, bryan.reaka@wku.edu 270.745.7032

**1. Identification of course:**

* 1. Course prefix (subject area) and number: AMS 394
	2. Course title: Lean Manufacturing
	3. Credit hours: 3

**2. Current prerequisites: AMS 356**

**3. Proposed prerequisites: None**

**4. Rationale for the revision of prerequisites:** The topics covered in Lean Manufacturing deal with production systems in market characterization, aggregate planning and just-in-time philosophy. Although the topics taught in AMS 356 are tangentially related to all of these, they are not required as a prerequisite skill set for students to matriculate successfully through AMS 394.

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

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

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

 Architectural and Manufacturing Sciences Department: \_\_\_\_\_8-21-2013\_\_\_\_\_\_

 OCSE Curriculum Committee \_\_\_\_\_9-05-13\_\_\_\_\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 8-20-2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise Course Prerequisites**

**(Consent Item)**

Contact Person: Bryan Reaka, bryan.reaka@wku.edu 270.745.7032

**1. Identification of course:**

* 1. Course prefix (subject area) and number: AMS 396
	2. Course title: Intro Supply Chain Management
	3. Credit hours: 3

**2. Current prerequisites: AMS 356 and AMS 371**

**3. Proposed prerequisites: None**

**4. Rationale for the revision of prerequisites:** The topics covered in Supply Chain Management deal with logistics, the value of information and decision support systems. Although the topics taught in AMS 356 and AMS 371 are related to all of these, they are not required as a prerequisite skill set for students to matriculate successfully through AMS 396.

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

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

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

 Architectural and Manufacturing Sciences Department \_\_\_\_\_8-21-2013\_\_\_\_\_\_

 OCSE Curriculum Committee \_\_\_\_\_9-05-13\_\_\_\_\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: August 19, 2013

**Ogden College of Science and Engineering**

**Department of Geography and Geology**

**Proposal to Revise Course Number**

**(Consent Item)**

Contact Person: Greg Goodrich, 745-5986, gregory.goodrich@wku.edu

1. **Identification of proposed course**

1.1 Course prefix (subject area) and number: GEOG 424

1.2 Course title: Weather Analysis and Forecasting

1. **Proposed course number: GEOG 324**
2. **Rationale for revision of course number:** GEOG 424 was one of the higher-level courses of the original B.S. in Geography – Land, Weather, Climate track. With the creation of the B.S. in Meteorology degree in 2008, GEOG 424 became the prerequisite for the rest of the newly created upper-division meteorology courses. This renumbering from 424 to 324 better reflects the course progression of the B.S. in Meteorology degree.

NOTE: A proposal has been submitted to change the prefix for Meteorology courses from GEOG to METR, so in Fall 2014 this course will change from GEOG 424 to METR 324.

1. **Proposed term for implementation:** Fall 2014
2. **Dates of prior committee approvals:**

|  |  |
| --- | --- |
| Department of Geography and Geology | 8/21/2013 |
| Ogden College Curriculum Committee  | 9/05/13 |
| Undergraduate Curriculum Committee  |  |
| University Senate |  |

Proposal Date: August 1, 2013

**Ogden College of Science and Engineering**

**Department of Geography and Geology**

**Proposal to Revise Course Number**

**(Consent Item)**

Contact Person: David Keeling (david.keeling@wku.edu), 5-4555

**1. Identification of course:**

* 1. Current course prefix (subject area) and number: GEOG 444
	2. Title: Environmental Ethics in Geography
	3. Credit hours: 3

**2. Proposed course number:** GEOG 344

**3. Rationale for the revision of course number:** The Department is revising its course

 sequencing as part of its move to ensure a four-year program completion cycle and to

 make sure that connections between foundation and capstone courses are rational and

 meaningful. Environmental Ethics should be taken in the Junior year before taking

 senior-level courses in environment and sustainability.

**4. Proposed term for implementation: 201430**

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

Department of Geography and Geology \_\_\_\_\_\_8/21/2013\_\_\_\_

 Ogden College Curriculum Committee \_\_\_\_\_\_9/05/13\_\_\_\_\_\_\_

 Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**