**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 action items for consideration at the September 2013, UCC meeting:

1. New Business

|  |  |
| --- | --- |
| **Type of item** | **Description of Item & Contact Information** |
| Action | **Revise a Program**Ref. #506, Advanced ManufacturingContact: Bryan Reaka, bryan.reaka@wku.edu, x57032 |
| Action | **Revise a Program**Ref. #1718, Food Processing and TechnologyContact: John Khouryieh, hanna.khouryieh@wku.edu, x54126 |
| Action | **Multiple Revisions to a Course**GEOG 464, Geography of EuropeContact: David Keeling, david.keeling@wku.edu, x54555 |
| Action | **Create a New Course**GEOG 226, Our Dangerous PlanetContact: Greg Goodrich, gregory.goodrich@wku.edu, x55986 |
| Action | **Create a New Course**GEOG 227, Our Vulnerable PlanetContact: Greg Goodrich, gregory.goodrich@wku.eu, x55986 |

Proposal Date: August 20, 2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise a Program**

**(Action Item)**

Contact Person: Bryan Reaka bryan.reaka@wku.edu 745-7032

**1. Identification of program:**

* 1. Current program reference number: 506
	2. Current program title: Advanced Manufacturing
	3. Credit hours: 74

**2. Identification of the proposed program changes:**

 Changes for all concentrations

* Remove all concentrations

 Changes to Advanced Manufacturing Major

* Technical Core - Add the option for students of MKT 220 or FIN161 as well as keeping the option of ACCT 200
* Technical Core – Add the option for students of UC 400 as well as keeping AMS 398 as an option
* Management Core – Remove ENG 306 or ENG 307
* Management Core - Add the option for students of BUS 214C or COMM 346 or COMM 349 or COMM 362 or MGT 361 as well as keeping COMM 345 as an option
* Management Core – Add the option of MGT 200 or MGT 333 as well as keeping the option of MGT 301
* Management Core – Reduce number of hours from 30 to 27
* Advanced Manufacturing Core – Change name of the concentration to core
* Advanced Manufacturing Core – Add the option for students of CM 337 as well as keeping the option of AMS 217
* Advanced Manufacturing Core – Add AMS 352 to the core
* Advanced Manufacturing Core – Adjust the advisor-approved electives from 10 to 11/12
* Advanced Manufacturing Core – Adjust hours needed in the core from 25 to 28/29
* General Education – Adjust hours needed in General Education from 46 to 44/45
* General Education – Remove requirement of ECON 202 and replace with Category C elective
* General Education – Change the math from MATH 117, or MATH 118 or Higher to MATH 117 or higher
* General Education – Remove requirement of CHEM 116/106 to a Cat D course
* General Education – Remove requirement of PHYS 201 to a Category D Lab course
* General Education – Remove requirement of SFTY 171 to a Category F course

**3. Detailed program description:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Advanced Manufacturing | (Old) 74 |  | Advanced Manufacturing | (New)  | 74 |
| Manufacturing & Industrial Distribution |  | No Concentration |  |  |
| *Technical Core: 19hrs* |  | *Technical Core: 19hrs* |  |  |
| **Introductory Accounting - Financial** | **ACCT200** | **3** |  | **Introductory Accounting or** **Basic Marketing Concepts or** **Personal Finance** | **ACCT200 or MKT 220 or****FIN 161** | **3** |
| Basic Electricity | AMS120 | 3 |  | Basic Electricity | AMS120 | 3 |
| Architectural Drafting or CADD for Manufacturing | AMS 163/205 | 3 |  | Architectural Drafting or CADD for Manufacturing | AMS 163/205 | 3 |
| Industrial Statistics | AMS271 | 3 |  | Industrial Statistics | AMS271 | 3 |
| **Internship I** | **AMS398** | **1** |  | **Mentored Research Experience or Internship I** | **UC 400 or AMS398** | **1** |
| Senior Research | AMS490 | 3 |  | Senior Research | AMS490 | 3 |
| Robotics and Machine Vision | AMS 328 | 3 |  | Robotics and Machine Vision | AMS 328 | 3 |
|   |   |   |  |   |   |   |
| ***Management Core: 30hrs*** |  | ***Management Core: 27hrs*** |  |  |
| Work Design/Ergonomics | AMS310 | 3 |  | Work Design/Ergonomics | AMS310 | 3 |
| Systems Design and Operation | AMS356 | 3 |  | Systems Design and Operation | AMS356 | 3 |
| Project Management | AMS390 | 3 |  | Project Management | AMS390 | 3 |
| Technology Mgmt./Sup./Team Blding | AMS430 | 3 |  | Technology Mgmt./Sup./Team Blding | AMS430 | 3 |
| **Business Writing or Technical Writing**  | **ENG 306 or 307** | **3** |  |  |  |  |
| **Advanced Public Speaking** | **COMM345** | **3** |  | **Basic Business Communications or Advanced Public Speaking or Persuasion or Interpersonal Communication or Group Decision Making or Organizational Communication or Business Communication Fundamentals** | **BUS 214C or****COMM 345 or COMM 346 or COMM 349 or COMM 362 or MGT 361** | **3** |
| **Business Law** | **MGT301** | **3** |  | **Legal Environment of Business or****Business Law or** **MGMT of Nonprofit Org** | **MGT 200 or MGT301 or MGT 333** | **3** |
| Quality Assurance | AMS371 | 3 |  | Quality Assurance | AMS371 | 3 |
| Lean Manufacturing | AMS 394 | 3 |  | Lean Manufacturing | AMS 394 | 3 |
| Intro to Supply Chain Management | AMS 396 | 3 |  | Intro to Supply Chain Management | AMS 396 | 3 |
|   |   |   |  |   |   |   |
| ***Manufacturing & Industrial Distribution Conc: 25hrs*** |  | ***Advanced Manufacturing Core:*** | ***28-29hrs*** |
| **Industrial Materials** | **AMS217** | **3** |  | **Industrial Materials or** **Applied Strength of Materials** | **AMS217 or CM337** | **3** |
| Manufacturing Methods | AMS227 | 3 |  | Manufacturing Methods | AMS227 | 3 |
| Manufacturing Operations  | AMS342 | 3 |  | Manufacturing Operations  | AMS342 | 3 |
| Automated Systems | AMS343 | 3 |  | Automated Systems | AMS343 | 3 |
|  |  |  |  | **Food Processing: Unit Operation** | **AMS352** | **3** |
| Computer Numeric Control | AMS370 | 3 |  | Computer Numeric Control | AMS370 | 3 |
|  |  |  |  |  |  |  |
| **Advisor Approved Electives** |  | **10** |  | **Advisor Approved Electives** |  | **11-12** |
| ***General Education (Old)*** | ***46 hrs*** |  |  | ***General Education (New)*** | ***44-45 hrs*** |  |
| Category A | ENG100 | 3 |  | Category A | ENG100 | 3 |
|   | ENG300 | 3 |  |   | ENG300 | 3 |
|   | Foreign Lang | 3 |  |   | Foreign Lang | 3 |
|   | Public Speaking | 3 |  |   | Public Speaking | 3 |
| Category B | Lit. Elective | 3 |  | Category B | Lit. Elective | 3 |
|   | Category B-II | 3 |  |   | Category B-II | 3 |
|   | Category B-II | 3 |  |   | Category B-II | 3 |
| Category C | HIST119/120 | 3 |  | Category C | HIST119/120 | 3 |
|  | **ECON202** | **3** |  |  | **Category C** | **3** |
|   | Category C | 3 |  |   | Category C | 3 |
| **Category D** | **MATH 117, or MATH 118 OR HIGHER** | **3** |  | **Category D** | **MATH 117, or HIGHER** | **3** |
|  | **CHEM 116** | **3** |  |  | **Category D**  | **3** |
|  | **CHEM 106** | **1** |  |  |  |  |
|  | **PHYS201** | **4** |  |  | **Category D Lab** | **3-4** |
| Category E | Category E | 3 |  | Category E | Category E | 3 |
| Category F | **SFTY171** | **1** |  | **Category F** |  |  |
|   | Category F | **1** |  |  | **Category F** | **2** |
| **Program Grand Total Hours:** |  | **120** |  | **Program Grand Total Hours:** |  | **120** |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Advanced Manufacturing | (Old) 74 |  |
| Food Processing and Technology |   | (New)None |
| *Technical Core: 19hrs* |  |
| Introductory Accounting - Financial | ACCT200 | 3 |  |
| Basic Electricity | AMS120 | 3 |  |
| Architectural Drafting or CADD for Manufacturing | AMS 163/205 | 3 |  |
| Industrial Statistics | AMS271 | 3 |  |
| Internship I | AMS398 | 1 |  |
| Senior Research | AMS490 | 3 |  |
| Robotics and Machine Vision | AMS 328 | 3 |  |
|   |   |   |  |
| *Management Core: 30hrs* |  |
| Work Design/Ergonomics | AMS310 | 3 |  |
| Systems Design and Operation | AMS356 | 3 |  |
| Project Management | AMS390 | 3 |  |
| Technology Mgmt./Sup./Team Blding | AMS430 | 3 |  |
| Business Writing or Technical Writing  | ENG 306 or 307 | 3 |  |
| Advanced Public Speaking | COMM345 | 3 |  |
| Business Law | MGT301 | 3 |  |
| Quality Assurance | AMS371 | 3 |  |
| Lean Manufacturing | AMS 394 | 3 |  |
| Intro to Supply Chain Management | AMS 396 | 3 |  |
|  |  |  |  |
| *Food Processing and Technology Conc: 25hrs* |  |
| Science of Food Processing | AMS 301 | 3 |  |
| Food Laws and Regulations | AMS 303 | 3 |  |
| Automated Systems | AMS 343 | 3 |  |
| Food Processing: Unit Operations | AMS 352 | 3 |  |
| Fundamentals of HACCP | AMS 395 | 3 |  |
| Food Quality Assurance  | AMS 381 | 3 |  |
| Food Packaging | AMS 443 | 3 |  |
| Commodity Food Processing | AMS 462 | 3 |  |
| Advisor Approved Electives |   | 1 |  |
| General Education (OLD) | 46 hrs |   |  |
| Category A | ENG100 | 3 |  |
|   | ENG300 | 3 |  |
|   | Foreign Lang | 3 |  |
|   | Public Speaking | 3 |  |
| Category B | Lit. Elective | 3 |  |
|   | Category B-II | 3 |  |
|   | Category B-II | 3 |  |
| Category C | HIST119/120 | 3 |  |
|   | ECON202 | 3 |  |
|   | Category C | 3 |  |
| Category D | MATH 117, or MATH 118 OR HIGHER | 3 |  |
|  | CHEM 105 | 3 |  |
|  | CHEM 106 | 1 |  |
|  | BIO 207 | 3 |  |
|   | BIO 208 | 1 |  |
| Category E | Category E | 3 |  |
| Category F | SFTY171 | 1 |  |
|   | Category F | 1 |  |
| **Program Grand Total Hours:** |  | **120** |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Advanced Manufacturing | (Old) 74 |  |  |
| **Quality Systems** | **(New) NONE** |
| *Technical Core: 19hrs* |  |  |  |
| Introductory Accounting - Financial | ACCT200 | 3 |  |
| Basic Electricity | AMS120 | 3 |  |
| Architectural Drafting or CADD for Manufacturing | AMS 163/205 | 3 |  |
| Industrial Statistics | AMS271 | 3 |  |
| Internship I | AMS398 | 1 |  |
| Senior Research | AMS490 | 3 |  |
| Robotics and Machine Vision | AMS 328 | 3 |  |
|   |  |
| *Management Core: 30hrs* |  |  |  |
| Work Design/Ergonomics | AMS310 | 3 |  |
| Systems Design and Operation | AMS356 | 3 |  |
| Project Management | AMS390 | 3 |  |
| Technology Mgmt./Sup./Team Blding | AMS430 | 3 |  |
| Business Writing or Technical Writing  | ENG 306 or 307 | 3 |  |
| Advanced Public Speaking | COMM345 | 3 |  |
| Business Law | MGT301 | 3 |  |
| Quality Assurance | AMS371 | 3 |  |
| Lean Manufacturing | AMS 394 | 3 |  |
| Intro to Supply Chain Management | AMS 396 | 3 |  |
|  |  |
| *Quality Systems Conc: 25hrs* |  |  |  |
| Industrial Materials | AMS217 | 3 |  |
| Manufacturing Operations  | AMS342 | 3 |  |
| Computer Numeric Control | AMS370 | 3 |  |
| Reliability & Probability | AMS 391 | 3 |  |
| Quality Management | AMS392 | 3 |  |
| Design of Industrial Experiments | AMS471 | 3 |  |
| Advisor Approved Electives |   | 7 |  |
| General Education (OLD) | 44 hrs  |   |  |
| Category A | ENG100 | 3 |  |
|   | ENG300 | 3 |  |
|   | Foreign Lang | 3 |  |
|   | Public Speaking | 3 |  |
| Category B | Lit. Elective | 3 |  |
|   | Category B-II | 3 |  |
|   | Category B-II | 3 |  |
| Category C | HIST119/120 | 3 |  |
|   | ECON202 | 3 |  |
|   | Category C | 3 |  |
| Category D | MATH 117, or MATH 118 OR HIGHER | 3 |  |
|  | Category D-II | 3 |  |
|  | Category Dl-l | 3 |  |
| Category E | Category E | 3 |  |
| Category F | SFTY171 | 1 |  |
| Category F |  | 1 |
| Electives |  |  |  |
| **Electives** |  | **2** |  |
| **Program Grand Total Hours:** |  | **120** |  |
|  |  |  |  |

**4. Rationale for the proposed program change:**

Changes for all concentrations

* Remove all concentrations

This is being done due to low enrollments in some of the concentrations in the program. We are consolidating to lower the number of required course offerings in the program.

 Changes to Advanced Manufacturing Major

* Technical Core - Add the option for students of MKT 220 or FIN161 as well as keeping the option of ACCT 200.

This will allow students to have different options for courses that are offered by the College of Business.

* Technical Core – Add the option for students of UC 400 as well as keeping AMS 398 as an option.

UC 400 is required of students who are completing a FUSE grant with the University.

* Management Core – Remove ENG 306 or ENG 307

Writing across all levels of coursework has been initiated in the Advanced Manufacturing Program. This includes sessions on resume writing and technical memos for the students.

* Management Core - Add the option for students of BUS 214 or COMM 346 or COMM 349 or COMM 362 or MGT 361 as well as keeping COMM 345 as an option.

This allows students more scheduling options for courses in the business/ advanced communication areas.

* Management Core – Add the option of MGT 200 or MGT 333 as well as keeping the option of MGT 301.

This allows students more scheduling options for courses in the business law area.

* Management Core – Reduce number of hours from 30 to 27

This reduction occurs due to the removal of ENG 306/307 from list of required courses.

* Advanced Manufacturing Core –Change name of the concentration to Core

The core name will be the same as the major since the concentrations no longer exist.

* Advanced Manufacturing Core – Add the option for students to take CM 337 as well as keeping the option of AMS 217.

This allows students more scheduling options for courses.

* Advanced Manufacturing Core – Add AMS 352 to the core

Approximately 15 percent of the graduates from the Advanced Manufacturing Program have gone to work in the foods industries. With the removal of the Food Processing and Technology Concentration, the food industry has suggested that AMS 352 Food Processing: Unit Operations be added to the curriculum.

* Advanced Manufacturing Core – Adjust the advisor-approved electives from 10 to 11/12

This is due to an adjustment in the General Education hours which allows more freedom in the advisor-approved electives.

* Advanced Manufacturing Core – Adjust hours needed in the core from 25 to 28/29

This is due to an adjustment in the General Education hours which allows more freedom in the advisor-approved electives.

* General Education – Adjust hours needed in General Education from 46 to 44/45

This is due to the removal of prescribed classes in Category D.

* General Education – Remove requirement of ECON 202 and replace with Category C elective

Many students transfer into the program with the Category C general education completed.

* General Education – Change the math from MATH 117, or MATH 118 or higher to MATH 117 or higher.

MATH 118 is no longer taught by the Math Department.

* General Education – Remove requirement of CHEM 116/106 to a Cat D course.

With the consolidation of the program, the diversity of students’ career goals will be addressed during advising as to which course they should take in this area.

* General Education – Remove requirement of PHYS 201 to a Category D Lab course

With the consolidation of the program the diversity of students’ career goals will be addressed during advising as to which course they should take in this area.

* General Education – Remove requirement of SFTY 171 to a Category F course.

This will allow students who come to the program with this category already completed to not have to take an additional course. Almost all companies include safety and first aid training in their orientation of new employees.

**5. Effective Catalog Year:** 2014-2015

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

Architectural and Manufacturing SciencesDepartment \_\_\_\_\_8-21-2013\_\_\_\_\_

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

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

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

Proposal Date: 08/20/2013

**Ogden College of Science and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise A Program**

**(Action Item)**

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

**1. Identification of program:**

* 1. Current program reference number: 1718
	2. Current program title: Food Processing and Technology
	3. Credit hours: 18

**2. Identification of the proposed program changes:**

Reduce the certificate total credit hours from 18 to 12.

* Remove AMS443
* Remove AMS462
* Remove AMS381
* Remove AMS271

**3. Detailed program description:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |   |  |  |  |  |
|  | (OLD)  |  |  | (NEW)  |
| Food Processing and Technology  |   |  | Food Processing and Technology |   |
|  |  |  |  |  |  |  |
| ***Core Courses (9 credits)*** |  |  |  |  |  |  |
| Introduction to Food Science & Technology | AMS 301 | 3 |  | Introduction to Food Science & Technology | AMS 301 | 3 |
| Food Laws and Regulations | AMS 303 | 3 |  | Food Laws and Regulations | AMS 303 | 3 |
| Food Processing: Unit Operations | AMS 352 | 3 |  | Food Processing: Unit Operations | AMS 352 | 3 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| ***Elective Courses (choose 9 credits)*** |  |  |  |  |  |  |
| Fundamentals of HACCP | AMS 395 | 3 |  | Fundamentals of HACCP | AMS 395 | 3 |
| **Food Packaging** | **AMS 443** | **3** |  |  |  |  |
| **Commodity Food Processing** | **AMS 462** | **3** |  |  |  |  |
| **Food Quality Assurance** | **AMS 381** | **3** |  |  |  |  |
| **Industrial Statistics** | **AMS 271** | **3** |  |  |  |  |
|  |  |  |  |  |  |  |
| **Program Total Hours:** |  | **18** |  | **Program Total Hours:** |  | **12** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**4. Rationale for the proposed program change:**

The purpose of the certificate isto provide students and professionals working in the food industry with the necessary knowledge in food processing, quality assurance and food safety to advance their careers. The previous courses are not necessary for the success of students in this certificate. Only the core courses (AMS 301, 303, 352 and 395) are needed to provide students with necessary knowledge to succeed in the food processing industry. In addition, the enrollment is currently low in the certificate so by removing those extra courses we are expecting the enrollment will be increased and the certificate will become more attractive to students and professionals as they will finish it in as many as two semesters.

**5. Proposed term for implementation and special provisions (if applicable):** Spring 2014

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

|  |  |
| --- | --- |
| Architectural and Manufacturing SciencesDepartment  | 08/21/2013 |
| OCSE Curriculum Committee  | 09/05/13 |
| Undergraduate Curriculum Committee |  |
| University Senate |  |

Proposal Date: 8/29/2013

**Ogden College of Science and Engineering**

**Department of Geography and Geology**

**Proposal to Make Multiple Revisions to a Course**

**(Action Item)**

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

**1. Identification of course:**

* 1. Current course prefix (subject area) and number: GEOG 464
	2. Course title: Geography of Europe

**2. Revise course number:**

2.1 Current course number: GEOG 464

2.2 Proposed course number: GEOG 364

2.3 Rationale for revision of course number: The Department is re-sequencing upper-division courses to fit the level at which students should be taking them. Regional courses are best taken at the junior level, thus the proposed 300-level designation.

**3. Revise course prerequisites/corequisites/special requirements:**

3.1 Current prerequisites: None

3.2 Proposed prerequisites: GEOG 110

3.3 Rationale for revision of course prerequisites: GEOG 110 is the required introductory cultural geography course for the program, it meets general education requirements, and it provides a logical foundation for more advanced regional geography coursework.

3.4 Effect on completion of major/minor sequence: None, as GEOG 110 is already a required foundational course.

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

**9. 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: February 6, 2013

**Ogden College of Science and Engineering**

**Department of Geography and Geology**

**Proposal to Create a New Course**

**(Action Item)**

Contact Person: Greg Goodrich, gregory.goodrich@wku.edu, 5-5986

**1. Identification of proposed course:**

* 1. Course prefix (subject area) and number: GEOG 226
	2. Course title: Our Dangerous Planet
	3. Abbreviated course title: Our Dangerous Planet
	4. Credit hours and contact hours: 3
	5. Type of course: L – Lecture
	6. Prerequisites: None
	7. Course catalog listing: Introduction to how normal Earth processes concentrate their energies to create devastating impacts to humans and the built environment, with emphasis on survival techniques.

**2. Rationale:**

* 1. Reason for developing the proposed course: The Department of Geography and Geology has previously offered several bi-term courses focused on individual natural hazards and disasters (GEOG 204, 205, 207, 208, 209). The new GEOG 226 – Our Dangerous Planet would cover all tectonic, oceanic, and atmospheric natural hazards and disasters and would emphasize the spatial dimensions of risk for each hazard as well as survival techniques. This course will be proposed to the Colonnade Program under the Connections – Systems category.
	2. Projected enrollment in the proposed course: At other universities where natural hazards courses are offered enrollment is generally very robust, with some schools having as many as 5,000 students per year. We expect 50-100 students per semester it is offered.
	3. Relationship of the proposed course to courses now offered by the department: The individual hazard bi-term courses that were previously offered will be deleted to make way for this new course that will summarize all Earth natural hazards and disasters.
	4. Relationship of the proposed course to courses offered in other departments: No other department at WKU offers a natural hazards course.
	5. Relationship of the proposed course to courses offered in other institutions: Numerous other universities offer general education courses focused on natural hazards and disasters, including Tulane University (EENS 3050), San Diego State University (GEOL 303), and Baylor University (GEO 1401).

**3. Discussion of proposed course:**

* 1. Course objectives: Students in GEOG 226 – Our Dangerous Planet will understand the physical processes behind and the spatial dimension of Earth’s natural hazards and disasters with a special emphasis on surviving them. These disasters include tectonic, oceanic, and atmospheric hazards. The semester will conclude with a discussion of how climate change may affect the risk and severity of some of these hazards.
	2. Content outline: Each week the focus will be on a different natural hazard.
* Tornado
* Hurricane
* Avalanche/snow/ice/cold
* Drought/heat wave
* Volcano
* Earthquake
* Landslide
* Flood
* Lightning
* Tsunami
* Forest Fire
* Paleodisaster
* Climate Change
	1. Student expectations and requirements: Grades will be determined by mid-term exams and a final exam based on textbook readings and class discussions, homework assignments and in-class projects, and quizzes. Students will also create a research project based on one of the hazards covered in the semester.
	2. Tentative texts and course materials:

\*Abbott, P. L., 2013: *Natural Disasters*, 9th ed., McGraw Hill, 512 pp.

\*Hyndman, D. and Hyndman, D., 2013: *Natural Hazards and Disasters*, 4th ed., Brooks Cole, 576 pp.

\*Keller, E. A., and DeVecchio, D. E., 2011: *Natural Hazards*, 3rd ed., Prentice Hall, 528 pp.

**4. Resources:**

* 1. Library resources: See attached form
	2. Computer resources: None

**5. Budget implications:**

* 1. Proposed method of staffing: Existing faculty will teach this course
	2. Special equipment needed: None
	3. Expendable materials needed: None
	4. Laboratory materials needed: None

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

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

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

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

 General Education Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

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

**Attachment: Bibliography, Library Resources Form**, **Course Inventory Form**

Proposal Date: February 6, 2013

**Ogden College of Science and Engineering**

**Department of Geography and Geology**

**Proposal to Create a New Course**

**(Action Item)**

Contact Person: Greg Goodrich, gregory.goodrich@wku.edu, 5-5986

**1. Identification of proposed course:**

* 1. Course prefix (subject area) and number: GEOG 227
	2. Course title: Our Vulnerable Planet
	3. Abbreviated course title: Our Vulnerable Planet
	4. Credit hours: 3
	5. Type of course: L - Lecture
	6. Prerequisites: None
	7. Course catalog listing: Explore how anthropogenic processes such as climate change, pollution, urban sprawl, deforestation, and desertification impact the people on Earth and its ecosystems.

**2. Rationale:**

* 1. Reason for developing the proposed course: GEOG 227 – Our Vulnerable Planet is being developed as a companion course to the newly proposed GEOG 226 – Our Dangerous Planet. Where the theme of GEOG 226 is “How the Earth can kill humans”, the theme of GEOG 227 is “How humans are killing the Earth”. GEOG 227 would cover the physical processes behind various anthropogenic hazards and would emphasize the spatial dimensions of risk for each hazard. Contemporary and predicted future global change will be placed into context with how humans have responded to past global change. This course will be proposed to the Colonnade Program under the Connections – Systems category.
	2. Projected enrollment in the proposed course: Enrollment is predicted at 30-50 students per semester.
	3. Relationship of the proposed course to courses now offered by the department: The Department of Geography and Geology offers GEOG 455 – Global Environmental Change, which focuses on contemporary issues of environmental change at the global level with an emphasis on policy formation, implementation, and assessment. GEOG 455 is an upper-division course geared towards departmental majors and graduate students. GEOG 227 would be geared towards non-major students and will be proposed as part of the new Colonnade Program – Connections category under Systems.
	4. Relationship of the proposed course to courses offered in other departments: ENV 280 – Environmental Science is offered by the Department of Public Health. ENV 280 provides a general understanding of the application of science to the solution of contemporary environmental problems. GEOG 227 will examine the spatial dimensions of anthropogenic environmental issues from a hazards perspective with an emphasis on the implications of expected future change.
	5. Relationship of the proposed course to courses offered in other institutions: Many universities offer similar courses to GEOG 227, including Arizona State University (GPH 314), Harvard (PH 278), and Portland State University (UNST 232).

**3. Discussion of proposed course:**

* 1. Course objectives: Students in GEOG 227 – Our Vulnerable Planet will understand the physical processes behind and the spatial dimension of anthropogenic hazards with a special emphasis on how the hazards affect the seven billion people on earth and the ecosystems that support them. The semester will conclude with a discussion of how predicted global change may affect the risk and severity of some of these hazards in the future.
	2. Content outline: Each week the focus will be on a different anthropogenic hazard.
* Globalization
* Paleodisasters
* Population growth/urban sprawl
* Energy resources/biofuels
* Climate change
* Future climate change
* Urban heat island
* Air pollution/ozone/acid rain
* Drought/desertification/forest fires
* Water resources
* Agriculture/pollution/biogenetics
* Deforestation/biodiversity
* Exotic species
	1. Student expectations and requirements: Student expectations and requirements: Grades will be determined by mid-term exams and a final exam based on textbook readings and class discussions, homework assignments and in-class projects, and quizzes. Students will also create a research project based on one of the anthropogenic hazards covered in the semester.
	2. Tentative texts and course materials:

Botkin, D. B. and Keller, E. A., 2010: *Environmental Science: Earth as a Living*

*Planet*. Wiley, 656 pp.

\*Easton, T., 2012: *Taking Sides: Clashing Views on Environmental Issues*.

McGraw-Hill/Dushkin, 448 pp.

Hernan, R. E., 2010: *This Borrowed Earth: Lessons from the Fifteen Worst Environmental Disasters around the World*. Palgrave McMillan, 256 pp.

\*Raven, P. H., Hassenzahl, D. M., and Berg, L. R., 2011: *Environment, 8th ed*. Wiley, 592 pp.

\*Turekian, K. K., 1996: *Global Environmental Change: Past, Present, and Future*. Prentice Hall, 200 pp.

**4. Resources:**

* 1. Library resources: See attached library resources form
	2. Computer resources: None

**5. Budget implications:**

* 1. Proposed method of staffing: Existing faculty will teach this course
	2. Special equipment needed: None
	3. Expendable materials needed: None
	4. Laboratory materials needed: None

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

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

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

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

 General Education Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

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

**Attachment: Bibliography, Library Resources Form**, **Course Inventory Form**