Report from March 24, 2011 Meeting of the Undergraduate Curriculum Committee

Please note attached supporting documents regarding WTTI courses

College	Item Type	Action	Description
PCAL	Information	Reactivate a Suspended Course	DANC 212 Partnering I
PCAL	Information	Delete a Course	ART 300 Early Medieval Art
PCAL	Information	Delete a Course	ART 301 Romanesque and Gothic Art
PCAL	Information	Delete a Course	ART 302 19th Century Art
PCAL	Information	Delete a Course	ART 303 20th Century Art
PCAL	Information	Delete a Course	ART 473 Cement Sculpture
UC	Consent	Revise a Course Title	GWS 200 Introduction to Women's & Gender Studies
UC	Consent	Revise a Course Title	GWS 421 Women, Gender, and Science
UC	Consent	Revise a Course Title	GWS 470: Special Topics in Women's & Gender Studies
UC	Consent	Revise a Course Title	GWS 491: Practicum in Women's and Gender Studies
UC	Consent	Revise Prerequisite	INS 275C Web Page Design
UC	Consent	Revise Prerequisite	INS 285C Advance Software Applications
UC	Consent	Revise a Program	Ref. #494, Women's Studies
PCAL	Consent	Revise Course Prerequisites	ART 433 Package Design
PCAL	Consent	Revise Course Credit Hours	COMM 495 Independent Study in Communication
PCAL	Consent	Create a New Course	PS 376 Political Management
PCAL	Consent	Revise a Program	514 Bachelor of Fine Arts, Visual Arts
OCSE	Consent	Revise Course Prerequisites	GEOG 310, Global Hydrology
OCSE	Consent	Revise Course Prerequisites	GEOL 310, Global Hydrology
OCSE	Consent	Revise Course Prerequisites/Corequisites	CHEM 314, Introduction to Organic Chemistry
OCSE	Consent	Revise Course Prerequisites/Corequisites	MATH 307, Introduction to Linear Algebra
OCSE	Consent	Revise Course Title	AMS 217, Materials for Manufacturing
OCSE	Consent	Create a New Course	WTTI 201, Hydrology for Water Operations
OCSE	Consent	Create a New Course	WTTI 202, Drinking Water Sources, Quality & Standards

OCSE	Consent	Create a New Course	WTTI 203, Introduction to Drinking Water Treatment
OCSE	Consent	Create a New Course	WTTI 204, Introduction to Wastewater Treatment
OCSE	Consent	Create a New Course	WTTI 205, Introduction to Drinking Water Distribution
OCSE	Consent	Create a New Course	WTTI 206, Introduction to Wastewater Collection
OCSE	Consent	Create a New Course	WTTI 213, Basic Drinking Water Treatment Processes
OCSE	Consent	Create a New Course	WTTI 214, Coagulation and Flocculation Processes in Water Treatment
OCSE	Consent	Create a New Course	WTTI 215, Sedimentation Basins and Clarifiers in Water Treatment
OCSE	Consent	Create a New Course	WTTI 216, Water Filtration Processes
OCSE	Consent	Create a New Course	WTTI 217, Water Disinfection Processes
OCSE	Consent	Create a New Course	WTTI 223, Basic Calculations for Water Operations
OCSE	Consent	Create a New Course	WTTI 224, Basic Hydraulics for Water Operations
OCSE	Consent	Create a New Course	WTTI 225, Basic Hydraulics in Drinking Water Distribution Networks
OCSE	Consent	Create a New Course	WTTI 227, Basic Hydraulic Concepts in Wastewater Collection Systems
OCSE	Consent	Create a New Course	WTTI 232, Wastewater Microbiology
OCSE	Consent	Create a New Course	WTTI 233, Natural Wastewater Treatment Systems
OCSE	Consent	Create a New Course	WTTI 234, Basic Infrastructure for Water Distribution & Wastewater
OCSE	Consent	Create a New Course	WTTI 235, Water Distribution System Components
OCSE	Consent	Create a New Course	WTTI 236, Water Distribution System Operation and Maintenance
OCSE	Consent	Create a New Course	WTTI 237, Wastewater Collection System Assessment and Repair
OCSE	Consent	Create a New Course	WTTI 238, Wastewater Collection Systems Management
OCSE	Consent	Create a New Course	WTTI 239, Stormwater Management for Operators

OCSE	Consent	Create a New Course	WTTI 240, Motors, Engines, and Controls in Water Operations
OCSE	Consent	Create a New Course	WTTI 241, Introduction to Instrumentation & Control Systems in Water
OCSE	Consent	Create a New Course	WTTI 242, Basic Electricity for Water Operations
OCSE	Consent	Create a New Course	WTTI 243, Flowmeters, Sensors and Process Measurements
OCSE	Consent	Create a New Course	WTTI 244, Automatic Process Control for Water Operations
OCSE	Consent	Create a New Course	WTTI 249, Basic Water Chemistry for Operations
OCSE	Consent	Create a New Course	WTTI 250, Drinking Water Sampling and Analysis
OCSE	Consent	Create a New Course	WTTI 251, Wastewater Sampling and Analysis
OCSE	Consent	Create a New Course	WTTI 252, Water Operator Safety
OCSE	Consent	Create a New Course	WTTI 253, Wastewater Regulations
OCSE	Consent	Create a New Course	WTTI 254, Corrosion Control in Water Operations
OCSE	Consent	Create a New Course	WTTI 255, Ion Exchange Processes in Water Treatment
OCSE	Consent	Create a New Course	WTTI 256, Adsorption Processes in Water Treatment
OCSE	Consent	Create a New Course	WTTI 257, Aeration Processes in Water Treatment
OCSE	Consent	Create a New Course	WTTI 258, Membrane Processes in Water Treatment
OCSE	Consent	Create a New Course	WTTI 259, Introduction to Residuals Management in Water Operations
OCSE	Consent	Create a New Course	WTTI 260, Suspended Growth Systems in Wastewater Operations
OCSE	Consent	Create a New Course	WTTI 261, Attached Growth Systems in Wastewater Operations
OCSE	Consent	Create a New Course	WTTI 262, Nutrient Removal Processes in Water Operations
OCSE	Consent	Create a New Course	WTTI 263, Industrial Wastewater Pretreatment Processes
OCSE	Consent	Create a New Course	WTTI 264, Wastewater Residuals Management

OCSE	Consent	Create a New Course	WTTI 265, Recordkeeping and Reporting for Water Operations
OCSE	Consent	Create a New Course	WTTI 266, Customer Service and Public Relations in Water Operations
OCSE	Consent	Create a New Course	AMS 395, Fundamentals of HACCP
OCSE	Consent	Create a New Course	MATH 370, Applied Techniques in Mathematics
OCSE	Consent	Create a New Course	GEOG 459, Physical Hydrology
OCSE	Consent	Create a New Course	GEOG 461, Karst Environments
OCSE	Consent	Create a New Course	GEOG 489, Alternatives in Sustainability
OCSE	Consent	Make Multiple Revisions to a Course	AMS 303, Food Regulations
OCSE	Consent	Make Multiple Revisions to a Course	AMS 352, Food Processing I
OCSE	Consent	Make Multiple Revisions to a Course	AMS 381, Food Manufacturing Quality and Safety
OCSE	Consent	Make Multiple Revisions to a Course	AMS 443, Food Packaging
OCSE	Consent	Make Multiple Revisions to a Course	AMS 462, Food Processing II
OCSE	Consent	Make Multiple Revisions to a Course	GEOG 419, GIS Applications Development
OCSE	Consent	Make Multiple Revisions to a Course	MATH 431, Intermediate Analysis I
OCSE	Consent	Make Multiple Revisions to a Course	MATH 432, Intermediate Analysis II
OCSE	Consent	Revise Course Credit Hours	MATH 498, Senior Seminar
OCSE	Consent	Revise a Program	Ref. #506, Advanced Manufacturing
OCSE	Consent	Revise a Program	Ref. #537, Electrical Engineering
OCSE	Consent	Revise a Program	Ref. #363, Environmental Studies Minor
OCSE	Consent	Revise a Program	Ref. #674, Geography
OCSE	Consent	Revise a Program	Ref. #728 and #528, Major in Mathematics
OCSE	Consent	Revise a Program	Ref. #341, Minor in Computer Science
OCSE	Consent	Create a New Program	Minor in Nutritional and Food Chemistry
OCSE	Consent	Create a New Certificate Program	Certificate in Data Analysis using SAS
CHHS	Consent	Revise a Course Number	REC 322 Recreation Activity Facilitation

CHHS	Consent	Make Multiple Revisions to a Course	REC 220 Introduction to Nonprofit Human Service Organizations
CHHS	Consent	Make Multiple Revisions to a Course	REC 496 American Humanics Internship
CHHS	Consent	Create a New Course	HCA 353 Quality and Patient Safety in Long-Term Care
CHHS	Consent	Create a New Course	HCA 355 Nursing Facility Administration
CHHS	Consent	Create a New Course	REC 460 Grant Writing for Nonprofit Organizations
CHHS	Consent	Revise a Program	309 American Humanics
CHHS	Consent	Revise a Program	444 Recreation Administration
CHHS	Consent	Create a New Certificate Program	Undergraduate Certificate in Long-term Care Administration

Proposal Date: February 14, 2011

College of Health and Human Services
Department of Kinesiology, Recreation, and Sport
Proposal to Revise Course Number
(Consent Item)

Contact Person: Tammie Stenger-Ramsey, tammie.stenger@wku.edu, 5-6063

1. Identification of course:
- 1.1 Current course prefix and number: REC 322
- 1.2 Title: Recreation Activity Facilitation
- 1.3 Credit hours: 3.0

2. Proposed course number: REC 222

3. Rationale for the revision of course number: This course is an "introductory" course that is appropriate for freshmen and sophomores. It probably should have originally been a 200-level course instead of a 300-level course. Other courses in our program build upon skills and knowledge taught in this course, so we would like for students to take it earlier in their program.

4. Proposed term for implementation: Spring 2012

5. Dates of prior committee approvals:

Kinesiology, Recreation and Sport Department: _February 14, 2011____

CHHS Undergraduate Curriculum Committee _March 2, 2011_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Course Inventory Form

Proposal Date: February 7, 2011

College of Health and Human Services
Department of Kinesiology, Recreation and Sport
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: Raymond Poff, raymond.poff@wku.edu, 745-2498

1. Identification of course:
- 1.1 Current course prefix and number: REC 220
- 1.2 Course title: Introduction to Nonprofit Human Service Organizations
- 1.3 Credit hours: 3

2. Revise course title:
- 2.1 Current course title: Introduction to Nonprofit Human Service Organizations
- 2.2 Proposed course title: Introduction to Nonprofit Organizations
- 2.3 Proposed abbreviated title: Intro Nonprofit Organizations
- 2.4 Rationale for revision of course title: Course content is relevant to the entire nonprofit sector and not just human service focused nonprofits.

3. Revise course number:
- 3.1 Current course number: n/a
- 3.2 Proposed course number: n/a
- 3.3 Rationale for revision of course number: n/a

4. Revise course prerequisites/corequisites/special requirements:
- 4.1 Current prerequisites/corequisites/special requirements: n/a
- 4.2 Proposed prerequisites/corequisites/special requirements: n/a
- 4.3 Rationale for revision of course prerequisites/corequisites/special requirements: n/a
- 4.4 Effect on completion of major/minor sequence: n/a

5. Revise course catalog listing:
- 5.1 Current course catalog listing: Nonprofit human service organizations emphasizing: history, ethics, personnel and volunteer management, human development, program development, risk management, customer service, and career development.
- 5.2 Proposed course catalog listing: Survey of nonprofit organizations emphasizing: history, ethics, personnel and volunteer management, human development, program development, risk management, customer service, and career development.
- 5.3 Rationale for revision of course catalog listing: Course content is relevant to the entire nonprofit sector and not just human service focused nonprofits.

6. Revise course credit hours:

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

7. Proposed term for implementation: Spring 2012

8. Dates of prior committee approvals:

KRS Department: __February 7, 2011__

CHHS Undergraduate Curriculum Committee __3/2/11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Course Inventory Form

Proposal Date: February 7, 2011

College of Health and Human Services
Department of Kinesiology, Recreation and Sport
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: Raymond Poff, raymond.poff@wku.edu, 745-2498

1. Identification of course:
- 1.1 Current course prefix and number: REC 496
- 1.2 Course title: American Humanics Internship
- 1.3 Credit hours: 3

2. Revise course title:
- 2.1 Current course title: American Humanics Internship
- 2.2 Proposed course title: Nonprofit Internship
- 2.3 Proposed abbreviated title: Nonprofit Internship
- 2.4 Rationale for revision of course title: Reflect change in program name.

3. Revise course number:
- 3.1 Current course number: n/a
- 3.2 Proposed course number: n/a
- 3.3 Rationale for revision of course number: n/a

4. Revise course prerequisites/corequisites/special requirements:
- 4.1 Current prerequisites: REC 494 and instructor's permission.
- 4.2 Proposed prerequisites: REC 220, MGT 333, and instructor's permission.
- 4.3 Rationale for revision of course prerequisites requirements: Reflect changes to program (removal of REC 494 as required and addition of MGT 333 required).
- 4.4 Effect on completion of major/minor sequence: Prerequisite courses are offered twice per year and should not affect completion of minor sequence.

5. Revise course catalog listing:
- 5.1 Current course catalog listing:
- 5.2 Rationale for revision of course catalog listing:

6. Revise course credit hours:
- 6.1 Current course credit hours: 6
- 6.2 Proposed course credit hours: variable 3-6
- 6.3 Rationale for revision of course credit hours: Provide students the option to complete 150-300 hours of internship experience for 3-6 credit hours. Matches part of program revision. Allows more flexibility to meet student needs.

7. Proposed term for implementation: Spring 2012

8. Dates of prior committee approvals:

KRS Department:	__February 7, 2011__
CHHS Undergraduate Curriculum Committee	___3/2/11_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: February, 2011

College of Health and Human Services
Department of Public Health
Proposal to Create a New Course
(Action Item)

Contact Person: William N. Mkanta, Phd; william.mkanta@wku.edu; 270.745.5260

1. Identification of proposed course:

1.4 Course prefix and number: HCA 353
1.5 Course title: Quality and Patient Safety in Long-Term Care
1.6 Abbreviated course title: Quality in Long-Term Care
1.7 Credit hours: 3
1.8 Type of course: Lecture (L)
1.9 Prerequisites/corequisites: None
1.10 Course catalog listing: Application of quality management techniques with special emphasis on the types of populations, facilities, and expectations involved in long-term care service delivery programs.

2. Rationale:

2.1 Reason for developing the proposed course: This course will be part of the core requirement in the concurrently proposed undergraduate certificate in long-term care. It will give students an opportunity to identify and analyze patient safety and quality of care issues related to the diverse modes of long-term care delivery. The growing demand for long-term care has caused proliferation of long-term care innovations beyond the traditional institutions such as nursing homes. This course is a critical path to understanding key issues related to quality of care and patient safety in various settings where this type of care is delivered.

2.2 Projected enrollment in the proposed course: This course will be part of the core offerings in a cohort program that expects to have approximately 25 enrollees per cohort in each fall semester. Kentucky licensure exam for long-term care administration requires completion of baccalaureate degree; we expect interest expressed by both current and graduates of various degree programs will generate the estimated enrollment.

2.3 Relationship of the proposed course to courses now offered by the department: Part of the content offered in HCA 343 (Health Care Quality Management) will be included in the proposed course. However, the proposed course will be an important complement to HCA 343 because of its specialized focus quality aspects of long-term care services. Students in health care administration with aspiration in long-term care management would greatly benefit from taking these two courses.

2.4 Relationship of the proposed course to courses offered in other departments: No other WKU department offers a course examining quality in long-term care.

2.5 Relationship of the proposed course to courses offered in other institutions: None of the benchmark institution offers a course that uniquely addresses quality and patient safety issues in long-term care. Elsewhere, some courses on the management of long-term care may have some aspects of quality assurance as part of the courses that mostly focus on administrative and legal issues involved in long-term care. For example, the University of Southern California offers a course titled "Management of Long Term Care Organizations" that explores historical, regulatory and financing aspects of long-term care. Quality assurance is examined under regulatory conditions.

3. Discussion of proposed course:

3.1 Course objectives: After successfully completing the proposed course, students will gain the knowledge of the important issues related to improving the quality of long-term care. Specifically, they will be able to:

- Apply the principles of quality management to facilitate effective delivery of care to the patient populations receiving long-term care
- Develop strategies for collecting and using data from different long-term care delivery facilities to improve quality of care and outcomes.
- Identify the linkage between quality of care and quality of life and its importance to the recipients of long-term care.
- Demonstrate knowledge of quality and patient safety issues according to the type of facilities and services comprising long-term care continuum.
- Build research agenda associated with quality of care in long-term care service programs.
- Participate effectively as members of quality management teams in long-term care facilities and services.

3.2 Content outline:

- Introduction: Quality and patient safety issues in long-term care
- Users of long-term care
- Linkage between quality of care and quality of life
- What are the major safety and quality issues?
- Provider participation in quality issues
- Nature of quality and its impact
- Leadership and management roles
- Application of IT in improving quality of long-term care
- The environment: Effectiveness of policies on long-term care facilities, staffing and service delivery.

3.3 Student expectations and requirements: Student will be assigned contemporary readings related to quality issues in long-term care and prepared to share their opinions according to the objectives of the proposed course. Student participation and understanding of the course content will be assessed through discussions,

written assignments and responses to case studies pertaining to quality and safety in long-term care. Quizzes and exams will be given in relation to other core courses in the long-term care certificate.

3.4 Tentative texts and course materials: The course would be largely dependent on contemporary publications addressing the focused content areas. However, the following texts may be used (as would be indicated in the syllabus) to offer students the contextual foundation of the course:

Institute of Medicine (2001), Improving the Quality of Long-Term Care. Washington, DC: National Academy Press.

Linda S. Noelker & Zev Harel (Eds.) (2001). Linking Quality of Long-Term Care and Quality of Life. Springer Publishing Company, Inc.

Singh, D.A. (2009). Effective Management of Long-Term Care Facilities (2nd ed). Sudbury, MA: Jones and Bartlett Publishers.

Connie Evashwick (2005). The Continuum of Long-Term Care (3rd ed). Thomson Delmar Learning.

4. Resources:

4.1 Library resources: Adequate for the proposed course.
4.2 Computer resources: Adequate for the proposed course.

5. Budget implications:

5.1 Proposed method of staffing: The course will be part of long-term care certificate offered offload through DELO.
5.2 Special equipment needed: None.
5.3 Expendable materials needed: None
5.4 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

HCA Committee: October 11, 2010

Public Health Department: February 18, 2011

CHHS Undergraduate Curriculum Committee March 2, 2011

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 2/4/2011

College of Health and Human Services
Department of Public Health
Proposal to Create a New Course
(Action Item)

Contact Person: Kathleen Abrahamson, 270-745-6973, Kathleen.abrahamson@wku.edu

1. Identification of proposed course:

1.1 Course prefix and number: HCA 355
1.2 Course title: Nursing Facility Administration
1.3 Abbreviated course title: Nursing Facility Admin
1.4 Credit hours: 3
1.5 Type of course: L
1.6 Prerequisites/corequisites: HCA 345 or permission of instructor
1.7 Course catalog listing: Cover the domains of knowledge associated with the national licensure examination for Nursing Home Administrators along with other necessary knowledge for the administration of a long-term care facility.

2. Rationale:

2.1 Reason for developing the proposed course: At present no such course is offered in the Commonwealth of Kentucky. Further, it is estimated that the state would need to build a new 100 bed nursing home every day for the next decade to meet projected demand for long-term care facilities. This course is intended to both prepare students for the national board examination and provide a capstone experience for students enrolled in the proposed certificate.
2.2 Projected enrollment in the proposed course (based upon previous enrollments and student indicating interest in the program): 25 per offering
2.3 Relationship of the proposed course to courses now offered by the department: This course is part of the proposed Undergraduate Certificate in Long-term Care Administration.
2.4 Relationship of the proposed course to courses offered in other departments: No similar course exists at WKU. However, students who graduate with a baccalaureate degree are eligible to sit for the board exam. Thus students in Social Work, Sociology, Gerontology, Psychology, Business, Health Sciences or any other major that might place majors in long-term care settings would be a potential student for the course.
2.5 Relationship of the proposed course to courses offered in other institutions: Currently similar courses are offered without college credit through the national board website. These courses are solely designed to prepare students for the exam. This course both preps for the exam and provides students with background on how long-term care facilities fit within the larger continuum of long-term care services.

3. Discussion of proposed course:

3.1 Course objectives:

- Students will apply management theory to long-term care cases
- Demonstrate an understanding of human resource management in long-term care facilities
- Calculate reimbursement based on rules and regulations for long-term care facilities
- Demonstration an understanding of the physical, social, and psychological aspects of aging processes
- Familiarize students with Kentucky nursing facility regulations and quality indicators

3.2 Content outline:

- Organizational Management
- Management Accounting
- Gerontology
- Healthcare & medical needs
- Nursing services, programs, and issues
- Human Resources
- Regulatory Environment

3.3 Student expectations and requirements: Students will show mastery through examination, case analysis, and discussion.

3.4 Tentative texts and course materials:

- Allen, JE (2007). Nursing Home Administration (5^{th}). Springer Publishing
- Allen, JE (2008). The Licensing Exam Review Guide in Nursing Home Administration (5^{th}).

4. Resources:

4.1 Library resources: None required.

4.2 Computer resources: None beyond normal use.

5. Budget implications:

5.1 Proposed method of staffing: DELO staffing.

5.2 Special equipment needed: None

5.3 Expendable materials needed: None

5.4 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

HCA Program Committee _____October 15, 2010

Public Health Department: ___February 18, 2011

CHHS Curriculum Committee __3/2/11_____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: February 15, 2011

College of Health and Human Services
Department of Kinesiology, Recreation and Sport
Proposal to Create a New Course
(Action Item)

Contact Person: Raymond Poff, raymond.poff@wku.edu, 745-2498

1. Identification of proposed course:

1.1 Course prefix and number: REC 460
1.2 Course title: Grant Writing for Nonprofit Organizations
1.3 Abbreviated course title: Grant Writing - Nonprofit Orgs
1.4 Credit hours: 3
1.5 Type of course: L: Lecture
1.6 Prerequisites: ENG 300 or appropriate equivalent.
1.7 Course catalog listing: Thorough investigation of the grant writing process and the application of related skills. Includes how to research, identify, plan, organize, write, and submit grants.

2. Rationale:

2.1 Reason for developing the proposed course: There are specific aspects of grant writing that make it a unique format to other forms of business, technical, or creative writing that suggest the specific process and procedures should be taught in a stand-alone setting. After talking with students and practitioners in the nonprofit field in several settings, most recently at a breakfast that connected WKU students to local nonprofit leaders, grant writing was one of the specific skills that both groups of participants identified as a much needed area of expertise to be successful in the field.

The mission states that WKU "prepares students to be productive, engaged, and socially responsible citizen leaders of a global society. It provides research, service and lifelong learning opportunities for its constituents. WKU is responsible for stewarding a high quality of life for those within its reach." A grant writing course aligns directly with this mission as it provides applicable, knowledge that prepares students to not only be productive, engaged and socially responsible but also enables students to use the skills they learn to contribute to a better quality of life. Additionally, a grant writing course addresses several aspects of the strategic plan, including:

- Community and Civic Engagement –
- Writing Across the Curriculum –
- Interdisciplinary Programs –

2.2 Projected enrollment in the proposed course: 25

A basic enrollment of 25 is projected with this being determined through identification of the current number of Nonprofit Administration students, as well as students, in other disciplines such as theatre and dance who have a nonprofit component or emphasis within their major.

2.3 Relationship of the proposed course to courses now offered by the department:
Our department does not currently offer any courses focusing exclusively on the issues of grant writing, but does offer courses that address some of the competencies needed in the nonprofit sector. Some examples include REC 220 Introduction to Nonprofit Organizations, REC 496 Nonprofit Internship.

2.4 Relationship of the proposed course to courses offered in other departments:
PSY 475 Grant Writing was created and has only been taught one time. The WKU Department of Psychology does not intend to offer the course at this time and supports the creation of the REC 460 Grant Writing for Nonprofits. Additionally, MGT 333 Management of Nonprofit Organizations is relevant with its specific focus on the nonprofit sector. The proposed course is also relevant to other courses such as PERF 423 Performing Arts Management due to the large numbers of nonprofit arts organizations.
Other courses in other majors may introduce grant writing as a component of the total course, but no in-depth, practical coursework is offered. As already stated, anyone who is in a field related to the nonprofit sector can benefit from grant writing skills. Having this on one's resume strengthens their value by showing their civic engagement, writing ability, and desire to invest in their chosen career beyond basic academic knowledge and understanding.

2.5 Relationship of the proposed course to courses offered in other institutions:
A review of the undergraduate course catalogs at the University of Kentucky, University of Louisville, Murray State University, Eastern Kentucky University, Northern Kentucky University, and Morehead State University did not reveal any undergraduate grant writing courses being offered. NKU offers a graduate grant writing course and can accept, with instructor's permission, advanced undergraduate students.
This proposed course fills a current gap in undergraduate education in Kentucky.

3. Discussion of proposed course:

3.1 Course objectives: Upon completion of this course, students should be able to:

- Demonstrate the ability to locate grant funding opportunities.
- Successfully identify grants that are program appropriate.
- Conduct and/or gather the necessary program information to complete the grant.
- Demonstrate the ability to accurately and effectively write a grant.
- Discuss the role of grant writing in the nonprofit sector and how it relates to common issues faced by today's nonprofit organizations.

3.2 Content outline: Topics to be included in course discussions will include:

- *What is grant making?*
- *What is fundable?*
- *Grant Research*
- *Grant Planning*
- *Grant Organization*
- *Grant Development*
- *Grant Submission*
- *Grant Administration*

3.3 Student expectations and requirements:

Student learning will be evaluated by exams and a comprehensive grant writing project comprised of several components to be submitted and evaluated throughout the semester.

3.4 Tentative texts and course materials:

Hall, J. L. (2009). *Grant management: Funding for public and nonprofit programs.* Sudbury, MA: Jones & Bartlett Publishers.

Shore, A. & Carfora, J. M. (2010). *The art of funding and implementing ideas: A guide to proposal development and project management.* Thousand Oaks, CA: SAGE Publications.

4. Resources:

4.1 Library resources: Adequate

4.2 Computer resources: Adequate

5. Budget implications:

5.1 Proposed method of staffing: Adjunct instructor.

5.2 Special equipment needed: None

5.3 Expendable materials needed: None

5.4 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

KRS Department: __February 16, 2011_

CHHS Undergraduate Curriculum Committee ___3/2/11_____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: February 5, 2011

College of Health and Human Services
Department of Kinesiology, Recreation and Sport
Proposal to Revise A Program
(Action Item)

Contact Person: Raymond Poff, raymond.poff@wku.edu, 745-2498

1. Identification of program:

1.1 Current program reference number: 309
1.2 Current program title: American Humanics
1.3 Credit hours: 22

2. Identification of the proposed program changes:

- changing program title: from American Humanics to **Nonprofit Administration**
- changing credit hour range: from 22 hours to **21-24 hours**
- adding required courses: MGT 333, (ACCT 200 or REC 402 or SPM 402), and REC 460
- removing required course: REC 494
- adding required internship course: REC 496 as the required internship course
- modifying electives – deletions: FIN 261, PSY 475, REC 406
- modifying electives – additions: BA 110, CFS 271, CFS 375, COMM 240, COMM 460, ECON 202, ENG 301, ENG 306, ENG 307, ENG 415, ICSR 300, ICSR 301, LEAD 325, LEAD 330, LEAD 395, MKT 220, PERF 423, PHIL 320, PHIL/RELS 323, PS 250, PS 338, PS 440, PSY 350, REC 306, REC 328, REC 404, REC 424, SOCL 100, SOCL 210, SOCL 240, SOCL 300, SOCL 360, SOCL 362, SOCL 375, SPM 200, SPM 452, SWRK 101, SWRK 250, SWRK 344.
- establishing or modifying admission requirements: Admission to the Nonprofit Administration minor requires an advising appointment with the program coordinator.
- changes in academic regulations: A grade of 'C' or better is required for all courses used in the minor. No more than 12 hours from any course prefix may be used to fulfill the minor requirements.
- changing catalog description: The minor in Nonprofit Administration (reference number 309) prepares students for careers in, and service to, the nonprofit sector. Students take courses from several departments and programs of study to gain needed nonprofit competencies and experiences. This minor consists of 21-24 hours including the following required courses: REC 220, MGT 333, ACCT 200 or REC 402 or SPM 402, REC 460, and REC 496 (150-300 hours of internship experience for 3-6 credit hours). No more than 12 hours from any prefix may be used to fulfill the minor requirements. Some courses may have prerequisites. www.wku.edu/nonprofit

3. Detailed program description: Changes indicated in bold.

Catalog description	Catalog description

The minor in American humanics (nonprofit administration) (reference number 309) prepares students for careers in nonprofit organizations. Students can take courses from several departments and programs of study, and gain competencies and experiences required for the American humanics national certification. In addition to the coursework listed below, active participation in the American humanics Student Association is a requirement for the national certification. This minor consists of 22 hours including the following required courses: REC 220, REC 494, and REC 496 (or other pre-approved internship course).	The minor in **Nonprofit Administration** (reference number 309) prepares students for careers **in, and service to,** the nonprofit sector. **Students** take courses from several departments and programs of study **to** gain **needed nonprofit** competencies and experiences**.** This minor consists of **21-24** hours including the following required courses: REC 220, **MGT 333, ACCT 200 or REC 402 or SPM 402, REC 460, and REC 496 (150-300 hours of internship experience for 3-6 credit hours). No more than 12 hours from any prefix may be used to fulfill the minor requirements. Some courses may have prerequisites.** **www.wku.edu/nonprofit**

Current Program	Hrs	Revised Program	Hrs
American Humanics		**Nonprofit Administration**	
Required Courses		Required Courses	
REC 220 Intro to Nonprofit Organizations	3	REC 220 Intro to Nonprofit Organizations	3
		MGT 333 Management of Nonprofit Orgs	3
		ACCT 200 Accounting-Financial or REC 402 Fiscal Practices in Recreation or SPM 402 Fiscal Practices in Recreation	3
		REC 460 Grant Writing for Nonprofit Orgs	3
REC 494	1		
REC 496 or other pre-approved internship	**Up to 6**	**REC 496 Nonprofit Internship**	**3-6**
TOTAL REQUIRED	**7-10**	**TOTAL REQUIRED**	**15-18**

Current Program	Hrs	Revised Program	Hrs
Elective Courses		Elective Courses	
Students will ***choose one course*** from each of the four categories below		**Students will select two courses from the approved list or other courses as approved by the program coordinator.**	
Nonprofit Management, Human Resources Dev & Supervision		ACCT 420 Government & Not-for-profit Acct	3
		BA 110 Intro to Business & Entrepreneurship	**3**
Mgt 333, MGT 210, MGT	3	**CFS 271 Tourism Planning and**	**3**

311, or REC 406		**Development**	
		CFS 375 Meeting & Convention Management	**3**
		COMM 240 Critical Listening	**3**
Accounting/Financial Mgt/Fundraising		COMM 345 Advanced Public Speaking	3
		COMM 348 Interpersonal Communication	3
ACCT 200, ACCT 420, FIN 161, FIN 330, PSY 475, REC/SPM 402	3	COMM 349 Small Group Communication	3
		COMM 362 Organizational Communication	3
		COMM 460 Organizational Interviewing	**3**
Communication Skills		COMM 463 Intercultural Communication	3
COMM 148/348, COMM 263, COMM 345, COMM 349, COMM 461/362, LEAD 200, SWRK 379, REC 302, PSY 442	3	**ECON 202 Principles of Economics-Micro**	**3**
		ENG 301 Argument & Analysis in Written Disc.	**3**
		ENG 306 Business Writing	**3**
		ENG 307 Technical Writing	**3**
		ENG 415 Writing and Technology	**3**
Youth & Human Development		FIN 330 Principles of Financial Management	3
PSY 199, PSY 321, SWRK 330, SOCL 410	3	**ICSR 300 Public Problem Solving**	**3**
		ICSR 301 Seminar in Social Responsibility	**1**
		LEAD 200 Introduction to Leadership Studies	3
		LEAD 325 Leading Change	**3**
		LEAD 330 Leadership Ethics & Decision Making	**3**
		LEAD 395 Contemporary Leadership Issues	**3**
		MGT 210 Organization and Management	3
		MGT 311 Human Resources Management	3
		MKT 220 Basic Marketing Concepts	**3**
		PERF 423 Performing Arts Management	**3**
		PHIL 320 Ethics	**3**
		PHIL 323 Social Ethics	**3**
		RELS 323 Social Ethics	**3**
		PS 250 International Politics	**3**
		PS 338 Government and Ethics	**3**
		PS 440 Public Administration	**3**
		PSY 199 Introduction to Developmental Psychology	3
		PSY 321 Child Psychology	3
		PSY 350 Social Psychology	**3**
		PSY 422 Adolescent Psychology	3
		PSY 442 Begin Skills in Psychological Interviewing	3

		REC 302 Recreation Leadership	3
		REC 306 Program Planning	**3**
		REC 328 Inclusive Recreation	**3**
		REC 404 Facility Management	**3**
		REC 424 Camp and Conference Center Admin.	**3**
		REC 494 American Humanics Management Institute	1
		SOCL 100 Introduction to Sociology	**3**
		SOCL 210 Interaction Self in Society	**3**
		SOCL 240 Contemporary Social Problems	**3**
		SOCL 300 Using Statistics in Sociology	**3**
		SOCL 360 Rural and Urban Communities	**3**
		SOCL 362 Race, Class, and Gender	**3**
		SOCL 375 Diversity in American Society	**3**
		SOCL 410 Socialization: Changes Through Life	3
		SPM 200 Introduction to Sport Mgt	**3**
		SPM 452 Sport Leadership & Management	**3**
		SWRK 101 Foundations of Human Services	**3**
		SWRK 205 Introduction to Social work	**3**
		SWRK 330 Human Behavior in Social Environment I	3
		SWRK 344 Social Work Statistics & Data Analysis	**3**
		SWRK 379 Intro to Social Work Comm. Skills	3
TOTAL ELECTIVE HOURS	**12-15**	**TOTAL ELECTIVE HOURS**	**6**
TOTAL MINOR HOURS	**22**	**TOTAL MINOR HOURS**	**21-24**

4. Rationale for the proposed program change:

The American Humanics program had not been revised since its original Fall 2005 implementation and needed updates. A compelling cause for the revisions is to strengthen the program by requiring additional valuable coursework and making more relevant electives available to the wide range of majors enrolling in the minor program. The proposed revisions will help better prepare students for working in, or serving in, the nonprofit sector. The name change is to more clearly represent the nature of the program and also to respond to changes taking place in the national organization with which the program is currently affiliated.

5. Proposed term for implementation and special provisions: Fall 2011

Currently enrolled students will have three options: a) complete the current program as established, b) make course substitutions as needed by advisement, or c) transfer to the revised program.

6. Dates of prior committee approvals:

KRS Department: __February 7, 2011__

CHHS Undergraduate Curriculum Committee __March 2, 2011____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Program Inventory Form

Proposal Date: February 5, 2011

College of Health and Human Services
Department of Kinesiology, Recreation, and Sport
Proposal to Revise A Program
(Action Item)

Contact Person: Tammie Stenger-Ramsey, tammie.stenger@wku.edu, 745-6063

1. Identification of program:

1.1 Current program reference number: 444
1.2 Current program title: Recreation Administration
1.3 Credit hours: 24

2. Identification of the proposed program changes:

Change program title: from Recreation Administration to **Community Recreation.**
Removing required courses: Deleting REC 304, REC 402, REC 404, and REC 406**.**
Changing number of hours of required Courses: from 24 hours to 18 hours
Adding required courses: REC 328, REC 420
Changing number of hours of elective courses: from 0 to 6 hours
Adding approved elective list: REC 220, REC 222, REC 326, REC 332, REC 422, REC 424, REC 426, REC 428, REC 430, REC 482.

3. Detailed program description:

Proposed changes to the program are identified in **BOLD** typeface.

CURRENT PROGRAM	HRS	REVISED PROGRAM	HRS
Recreation Administration - Reference # 444		**Community Recreation - Reference # 444**	
REQUIRED COURSES		REQUIRED COURSES	
REC 200 Intro to Recreation	3	REC 200 Intro to Recreation	3
REC 302 Recreation Leadership	3	REC 302 Recreation Leadership	3
REC 304 Technology Applications in Recreation	3		
REC 306 Program Planning	3	REC 306	3
		REC 328 Inclusive Recreation	**3**
REC 402 Fiscal Practices in Recreation	3		
REC 404 Recreation Facility Management	3		
REC 406 Recreation Administration	3		
		REC 420 Intro to Commercial Recreation and Tourism	**3**
REC 493 Internship in Recreation	3	REC 493 Practicum in Recreation	3
TOTAL REQUIRED	**24**	**TOTAL REQUIRED**	**18**
ELECTIVE COURSES	**0**	**ELECTIVE COURSES**	**6**

TOTAL	24	TOTAL	24
		LIST OF APPROVED ELECTIVES	
		REC 220 Intro to Nonprofit Orgs	**3**
		REC 222 Recreation Activity Facilitation	**3**
		REC 326 Church Recreation	**3**
		REC 332 Outdoor Education	**3**
		REC 422 Campus Recreation	**3**
		REC 424 Camp & Conference Center Administration	**3**
		REC 426 Facility Planning & Design	**3**
		REC 428 Community Centers & Playgrounds	**3**
		REC 430 Recreation Resource Management	**3**
		REC 482 Recreation Workshop	**3**

4. Rationale for the proposed program change:

The current Recreation Administration minor is essentially a Recreation Major without electives and a shortened Practicum experience in lieu of an extended Internship. Since the last major curriculum revision – the Department of Kinesiology, Recreation, and Sport has added multiple new minors. We want to change the name of the minor to Community Recreation, so that it more closely reflects the intent and purpose of the minor.

The previous minor had no electives and allowed no room for flexibility for students interested in taking additional coursework in the Recreation Administration program.

5. Proposed term for implementation and special provisions: Fall 2011

6. Dates of prior committee approvals:

Kinesiology, Recreation & Sport Department _February 5, 2011___

CHHS Undergraduate Curriculum Committee __March 2, 2011_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Program Inventory Form

Proposal Date: February 2011

College of Health and Human Services
Department of Public Health
Proposal to Create a New Certificate Program
(Action Item)

Contact Persons: Kathleen Abrahamson, 270-745-6973, Kathleen.abrahamson@wku.edu
John White, 270-745-5867, john.white@wku.edu

1. Identification of program:

1.1 **Program title:** Undergraduate Certificate in Long-term Care Administration

1.2 **Required hours in program:** 15

1.3 **Special information:** Licensure requirements for Long-term Care (LTC) Administration require a college degree as one criterion prior to sitting for the licensing exam. This certificate is intended to help students prepare for that examination and career. Further, current trends in the industry are placing increasing reliance on other forms of adult care (assisted living facilities, adult daycare services, and home care).

1.4 **Catalog description:** This 15 hour certificate program, in conjunction with a bachelor's degree, prepares students for careers in both Long-term Care Administration and other adult care services. It follows a cohort model with students being enrolled every Fall term.

2. **Objectives of the proposed certificate program:**

- Prepare students who have a bachelor's degree for licensure as a Nursing Home Administrator
- Introduce students to alternative forms of adult health care services (assisted living, adult daycare services, home care)
- Increase student awareness of illnesses commonly associated with the elder adult
- Introduce students to the needs of different facilities with regards to staffing
- Give students an overview of federal and state (Kentucky) regulations regarding long-term care provision
- Explore socio/demographic changes affecting the industry.

3. Rationale:

3.1. **Reason for developing the proposed certificate program:** The proposed certificate program is expected to address three areas of need in LTC administration and WKU mission, namely market demand and industry expectations, program restructuring, and growth. The market demand for LTC, especially in health services involving the elderly, is growing at a rapid rate. At the same time, the elderly population currently seeking care is relatively knowledgeable of its health care, social, and psychological needs. The LTC

certificate program would prepare students in this environment through an effective coursework capable of developing knowledge and skills needed to make them succeed in the national examinations and eventually thrive in the LTC environment. The LTC certificate is one way of spearheading efforts to engage in program restructuring. As part of this process, the committee decided to lay down strategies to distinguish our program from others in the state and elsewhere based on a few, relevant content areas in health administration. LTC was unanimously agreed upon as one of the areas that can lead our program in achieving state and national recognition. Lastly, the LTC certificate program is expected to attract a large number of students, both current and graduates in diverse baccalaureate programs, since its content deals directly with a growing area of need and interest in health care industry.

3.2. **Relationship of the proposed certificate program to other programs now offered by the department:** The department offers HCA 345 as an introductory course in long term care administration. This is a required course in the health care administration major; it introduces the need and types of long term care facilities but by itself does not prepare students for any licensure exam nor does it distinguish in detail different settings and laws governing long term care. We propose to include HCA 345 into the certificate program as one of the existing courses the major.

3.3. **Relationship of the proposed certificate program to certificate programs offered in other departments:** Program requirements and objectives are distinct relative to other undergraduate certificate programs offered at WKU.

3.4. **Projected enrollment in the proposed certificate program:** All of the courses in the certificate have the potential of being offered online. This will be an important element of the program in order to reach non-traditional students in a cohort format. We expect 20-30 new students to be enrolled in the certificate per year.

3.5. **Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):** Eastern Kentucky University offers health service administration program with a concentration in ancillary health management that may include long-term care issues. University of Kentucky offers a graduate certificate in gerontology, an area examining the process of aging rather than health services associated with aging. None of the remaining Kentucky institutions offer any programs in long-term care.

3.6. **Relationship of the proposed certificate program to the university mission and objectives:**

- Service to the community through skilled management of health services for the elderly and other population groups in need of extended health care services

- Develop a class of Kentucky scholars with national recognition in health care management skills
- Global reach through training of international scholars in elderly and long term care management

4. Curriculum:

The certificate program consists of five courses.

HCA 345	**Long-Term Care Administration**	3 hrs	
GERO 100	**Introduction to the Aging Experience**	3 hrs	
PH 443	**Health and Aging**	3 hrs	
HCA 355	**Nursing Facility Administration**	3 hrs	
HCA 353	**Quality and Patient Safety in Long-Term Care**	3 hrs	
	Total	15 hrs	

5. Budget implications: This program will be operated through DELO.

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

HCA Program Committee October 11, 2010

Public Health Department: December, 2010

CHHS Curriculum Committee March 2, 2011_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Program Inventory Form

Proposal Date: 2/9/11

Enter College Name Here
Department of Theatre and Dance
Proposal to Reactivate a Suspended Course
(Consent Item)

Contact Person: Carrie Morris, carrie.morris@wku.edu, 745-3142

1. Identification of course:

1.1 Current course prefix (subject area) and number: DANC 212
1.2 Course title: Partnering I
1.3 Credit hours: 2

2. Rationale for the course reactivation: Enrollment in dance courses has been steadily increasing and therefore we have enough student interest to again offer Partnering I. In addition, the technical abilities of our dancers have been increasing, supporting the need for this class.

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

4. Proposed term for implementation: 201130

5. Dates of prior committee approvals:

Department of Theatre and Dance:	02/15/2011
Potter College Curriculum Committee	03/03/2011
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: January 28, 2011

Potter College of Arts and Letters
Department of Art
Proposal to Delete a Course
(Consent Item)

Contact Person: Guy Jordan, guy.jordan@wku.edu, x.58865

1. Identification of course:

1.1 Current course prefix (subject area) and number: Art 300
1.2 Course title: Early Medieval Art
1.3 Credit hours: 3

2. Rationale for the course deletion: This course, along with Art 301 (Romanesque and Gothic Art) has been replaced in the curriculum by a single course, Art 316 (Medieval Art and Architecture), in order to better suit the teaching specialties of the faculty.

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

4. Proposed term for implementation: Fall 2011

5. Dates of prior committee approvals:

Art Department/Division:	01/31/2011
Potter College Curriculum Committee	03/03/2011
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: January 28, 2011

Potter College of Arts and Letters
Department of Art
Proposal to Delete a Course
(Consent Item)

Contact Person: Guy Jordan, guy.jordan@wku.edu, x.58865

1. Identification of course:

1.1 Current course prefix (subject area) and number: Art 301
1.2 Course title: Romanesque and Gothic Art
1.3 Credit hours: 3

2. Rationale for the course deletion: This course, along with Art 300 (Early Medieval Art) has been replaced in the curriculum by a single course, Art 316 (Medieval Art and Architecture), in order to better suit the teaching specialties of the faculty.

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

4. Proposed term for implementation: Fall 2011

5. Dates of prior committee approvals:

Art Department/Division:	01/31/2011
Potter Curriculum Committee	03/03/2011
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: January 28, 2011

Potter College of Arts and Letters
Department of Art
Proposal to Delete a Course
(Consent Item)

Contact Person: Guy Jordan, guy.jordan@wku.edu, x.58865

1. Identification of course:

1.1 Current course prefix (subject area) and number: Art 302
1.2 Course title: 19th Century Art
1.3 Credit hours: 3

2. Rationale for the course deletion: Art 302 (19th Century Art) has been replaced in the curriculum by two courses, Art 408 (European Art: 1700-1848) and Art 409 (European Art 1848-1900) that provide a more coherent and specialized examination of the course material. Other parts of the content of Art 302 have also been absorbed into Art 312 (Art of the United States I) and Art 313 (Art of the United States II)

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

4. Proposed term for implementation: Fall 2011

5. Dates of prior committee approvals:

Art Department/Division:	01/31/2011
Potter College Curriculum Committee	03/03/2011
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: January 28, 2011

Potter College of Arts and Letters
Department of Art
Proposal to Delete a Course
(Consent Item)

Contact Person: Guy Jordan, guy.jordan@wku.edu, x.58865

1. Identification of course:

1.1 Current course prefix (subject area) and number: Art 303
1.2 Course title: 20th Century Art
1.3 Credit hours: 3

2. Rationale for the course deletion: Art 303 (20th Century Art) has been replaced in the curriculum by Art 410 (European Art: 1900-1945) that provides a more coherent and specialized examination of the course material. Other parts of the content of Art 303 have also been absorbed into Art 313 (Art of the United States II) and Art 390 (Contemporary Art) .

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

4. Proposed term for implementation: Fall 2011

5. Dates of prior committee approvals:

Art Department/Division:	01/31/2011
Potter College Curriculum Committee	03/03/2011
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: 2/16/2011

Potter College of Arts and Letters
Department of Art
Proposal to Delete a Course
(Consent Item)

Contact Person: Brent Oglesbee, brent.oglesbee@wku.edu, 5-6566

1. Identification of course:

1.1 Current course prefix (subject area) and number: ART 473
1.2 Course title: Cement Sculpture
1.3 Credit hours: 3

2. Rationale for the course deletion: The course was too specific in medium to be useful for our majors. It was one of many upper level courses students could choose as an elective and has been a suspended course for at least four years.

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

4. Proposed term for implementation: Fall, 2011

5. Dates of prior committee approvals:

Art Department/Division:	02/16/2011
Potter College Curriculum Committee	03/03/2011
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: 1/21/2011

Potter College of Arts and Letters
Department of Art
Proposal to Revise Course Prerequisites
(Action Item)

Contact Person: Brent Oglesbee, brent.oglesbee@wku.edu, 5-6566

1. Identification of course:
- 1.1 Course prefix (subject area) and number: ART 433
- 1.2 Course title: Package Design
- 1.3 Credit hours: 3

2. Current prerequisites: ART 330

3. Proposed prerequisites: ART 131 and ART 330, or consent of instructor for Graphic Design minors, (ref. 385)

4. Rationale for the revision of prerequisites:
ART 131 is required of all graphic design majors. Taking this course prior to ART 433 ensures students have an introduction to three-dimensional materials and spatial relationships. Consent of the instructor allows Advertising majors who minor in graphic design to take the course without adding credits hours to their minor.

5. Effect on completion of major/minor sequence:
This revision has no affect on art majors or advertising majors who minor in graphic design (ref. # 385).

6. Proposed term for implementation: Spring, 2012

7. Dates of prior committee approvals:

Art Department:	01/31/2011
Potter College Curriculum Committee	3/03/2011
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: 2/16/11

Potter College of Arts & Letters
Department of Communication
Proposal to Revise Course Credit Hours
(Action Item)

Contact Person: Larry Snyder, Lawrence.snyder@wku.edu, x5-3297

1. Identification of course:
- 1.1 Current course prefix (subject area) and number: COMM 495
- 1.2 Course title: Independent Study in Communication
- 1.3 Credit hours: 3.0

2. Proposed course credit hours: Variable 1-6

3. Rationale for the revision of course credit hours: Variable credit provides more flexibility for students in consultation with the faculty to develop research projects, including the Capstone experience.

4. Proposed term for implementation: Spring 2012

5. Dates of prior committee approvals:

Department of Communication:	02/18/2011
Potter College Curriculum Committee:	03/03/2011
Undergraduate Curriculum Committee	03/24/2011
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: January 18, 2011

Potter College
Department of Political Science
Proposal to Create a New Course
(Action Item)

Contact Person: Scott Lasley, scott.lasley@wku.edu, 5-2799

1. Identification of proposed course:

1.11 Course prefix (subject area) and number: PS 376
1.12 Course title: Political Management
1.13 Abbreviated course title: Political Management
1.14 Credit hours and contact hours: 3 (3 contact hours per week)
1.15 Type of course: Lecture
1.16 Prerequisites/corequisites: N/A
1.17 Course catalog listing: Applied course with focus on developing skills related to political management including fundraising, issue advocacy, and media strategy.

2. Rationale:

2.6 Reason for developing the proposed course: The creation of this course is a direct response from feedback received from former students who have worked in politics and/or campaigns after graduation from WKU. It also reflects the Department's effort to fulfill the University's mission to prepare productive and engaged leaders for a global society. This course is an extension of PS 375: Fundamentals of Campaign Management. Like PS 375, this course will have more of an applied/vocational focus than most other courses in our Department. The course will allow us to better prepare students for positions in a number of political and non-profit settings. Former students indicate that they would like more coverage of issues related to buying advertising (including television, radio, and print), budgeting and campaign finance, and working with the media. While some of these items have been covered in PS 375, the addition of this course will provide the time to go into more depth over more topics.

2.7 Projected enrollment in the proposed course: 30 (every other year) expected to primarily come from political science majors but may also attract other students interested in politics and non-profit careers. This projection is based on the typical enrollment for PS 375 and the number of students who had selected the campaign management track within the major.

2.8 Relationship of the proposed course to courses now offered by the department: The course would serve as a complement to PS 375: Fundamentals of Political Campaign Management. This course will cover topics that are either not covered in PS 375 or receive limited attention in it. PS 375 covers a wide range of issues related to campaign management. The issues range from candidate entry to campaign strategy. It is simply not possible to give all topics the amount of coverage that is needed. This course (PS 376) will provide the opportunity to expand on several areas that merit further attention than can be afforded in PS

375. These areas include advertising and fundraising/budgeting. This course will also allow coverage of areas (new and online media and issue advocacy) that had received only minimal coverage. In many ways PS 376 will relate to PS 375 similarly to the relationship between Intermediate Accounting I and II. It simply takes two courses to cover the material that students should be exposed to.

2.9 Relationship of the proposed course to courses offered in other departments: There is no similar course offered at WKU. However, there will be elements covered in the course that are covered by other courses. For example, some of the material we will cover under advertising will be covered in more breadth and depth in JOUR 341. We will focus on voter targeting and cover some of the nuts and bolts related to purchasing advertising, but will not cover the techniques of creating advertisements. Likewise, we will introduce strategies to utilize new media as part of electoral and issues campaigns. There is no reason for other departments to be wary of this course. Ideally, many of our students would be able to take courses from other majors to supplement and expand on the material they will be introduced to them in PS 375 and PS 376.

2.10 Relationship of the proposed course to courses offered in other institutions: There are a number of campaign and political management courses and programs offered across the country at the graduate and undergraduate level. They are more common at universities that place an emphasis on applied politics. Examples of schools that have made a commitment to political management majors/minors/tracks include Salisbury, Fort Hays State, George Washington University (particularly at the graduate level), Akron, and Utah. Most schools that offer an applied emphasis on political management supplement more traditional political science offerings with a course or two that explicitly focuses on campaign or political management. For example, Fort Hays State offers a course on political campaign management (660) and an interdisciplinary course on political communication. Utah (3160) offers a course in political management. Akron offers three courses (two campaign management courses and one on campaign finance). I am not aware of any directly equivalent courses at public universities in Kentucky colleges and universities.

3. Discussion of proposed course:

3.5 Course objectives: The primary objective of the course is to provide students an educational background that they will be able to apply in campaign, political, and other non-profit positions. Substantive objectives will evolve with shifting trends in campaigns and politics. Specific objectives include developing an understanding in the following areas:

- Political use of new media
- introduction to lobbying and issue advocacy (how to launch an issue campaign and influence legislators)
- fundraising and budgeting (from campaign finance rules to actual fundraising strategies)
- advertising strategies (including voter targeting, buying advertising, and design)

3.6 Content outline: The core content areas covered in the course will include:

- Voter targeting and mobilization (role and importance of; strategies)
- Fundraising (budgeting; developing and keeping donors; small versus large donors; event planning)
- New media and the Internet (strategies to utilize social media such as Twitter and Facebook; E-mail campaigns; online advertising; web presence)
- Advertising (comparison of media option; developing a campaign; what matters and what doesn't; how to purchase)
- Work of the Congressional Office
- Issue advocacy (lobbying techniques and strategies)

3.7 Student expectations and requirements: In addition to exams, students will develop a portfolio that highlights their work throughout the semester. For each major topic covered during the course, students will complete a project that will become part of their portfolio.

3.8 Tentative texts and course materials: Course Pack based on material and information from best practices and professional political and campaign seminars. The course will also make use of numerous resources available online and case studies which I will develop as the instructor. Textbooks that would be under consideration for use in the course include:

- Levine, Bertram. 2008. *The Art of Lobbying: Building Trust and Selling Policy*. CQ Press: Washington, DC.
- Burton, Michael John and Daniel Shea. 2010. *Campaign Craft: The Strategies, Tactics, and Art of Political Campaign Management, 4th Ed.* Praeger
- Pelosi, Christina. 2007. *Campaign Boot Camp: Basic Training for Future Leaders.* Polipoint Press.

4. Resources:

4.3 Library resources: Library resources are currently not adequate, but they will order all books necessary for the course.

4.4 Computer resources: University resources currently available to students are more than adequate.

5. Budget implications:

5.5 Proposed method of staffing: Existing staff will be used to teach the course.

5.6 Special equipment needed: None

5.7 Expendable materials needed: None

5.8 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Political Science:	02/17/11
Potter College Curriculum Committee	03/03/2011

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Bibliography

Books (Note: Resources considered to be essential resources for students and faculty are marked with *)

*Pelosi, Christina. 2007. *Campaign Boot Camp: Basic Training for Future Leaders.* Polipoint Press.

Levine, Bertram. 2008. *The Art of Lobbying: Building Trust and Selling Policy*. CQ Press: Washington, DC.

Burton, Michael John and Daniel Shea. 2010. *Campaign Craft: The Strategies, Tactics, and Art of Political Campaign Management, 4th Ed.* Praeger

Fusco, Peter. 2008. *Running: How To Design And Execute A Winning Political Campaign.* CreateSpace.

*Faucheux, Ronald. 2003. *Winning Elections: Political Campaign Management, Strategy, & Tactics*. M. Evans and Company.

DeKieffer, Donald. 2007. *The Citizen's Guide to Lobbying Congress*. Chicago Review Press.

*Gelak, Deanna. 2008. *Lobbying and Advocacy: Winning Strategies, Resources, Recommendations, Ethics and Ongoing Compliance for Lobbyists and Washington Advocates: The Best of Everything Lobbying and Washington Advocacy.* TheCapitol.Net, Inc.

*Zetter, Lionel. 2008. *Lobbying: The Art of Political Persuasion.* Harriman House.

Periodicals.

*Green, Donald and Alan Gerber. 2008. *Get Out the Vote, 2nd Edition.* Brookings.

*Barksdale, Brent. 2010. *Winning Political Tips.* Capitol Consulting, Inc.

*McNamara, Michael. 2008. *The Political Campaign Desk Reference: A Guide for Campaign Managers and Candidates Running for Elected Office.* Outskirts Press

Genn, Adina. 2009. *The Everything Guide to Fundraising*. Adams Media.

Panagopoulos, Costas. 2009. *Politicking Online: The Transformation of Election Campaign Communications.* Rutgers University Press

*Malchow, Hal. 2008. *Political Targeting, 2nd Ed.* Predicted Lists, LLC.

Periodicals

**Campaigns & Elections*

Proposal Date: 1/21/2011

Potter College of Arts and Letters
Department of Art
Proposal to Revise A Program
(Action Item)

Contact Person: Brent Oglesbee, brent.oglesbee@wku.edu, 5-6566

1. Identification of program:

1.1 Current program reference number: 514
1.2 Current program title: BFA, Visual Arts
1.3 Credit hours: 82

2. Identification of the proposed program changes:

- Deletion of upper level art history electives ART 300, 301, 302, 303
- Revised listing of upper level art history electives for studio concentration to include: ART 305, 315, 316, 408, 409, 410
- Revised listing of upper level art history electives for graphic design concentration to include: ART 305, 315, 316, 403, 408, 409, 410

3. Detailed program description:

BFA Visual Arts studio concentration	hrs.	BFA Visual Arts studio concentration (proposed)	hrs.
ART 130 Design	3	ART 130 Design	3
ART 131 3-D Design	3	ART 131 3-D Design	3
ART 140 Drawing	3	ART 140 Drawing	3
ART 240 Drawing	3	ART 240 Drawing	3
ART 340 Drawing	3	ART 340 Drawing	3
ART 341 Drawing	3	ART 341 Drawing	3
ART 440 Drawing	3	ART 440 Drawing	3
ART 105 History of Art to 1300	3	ART 105 History of Art to 1300	3
ART 106 History of Art since 1300	3	ART 106 History of Art since 1300	3
2 upper-level elective art history courses selected from the following menu: ART 300, 301, 302, 303, 312, 313, 314, 325, 334, 390, 401, 403, 405, 407, 445, 494, PHIL 305	6	2 upper-level elective art history courses selected from the following menu: **ART 305**, 312, 313, 314, **315, 316,** 325, 334, 390, 401, 403, 405, 407, **408, 409, 410,** 445, 494, PHIL 305	6
Any four of the following basic studios	12	Any four of the following basic studios	12
ART 220 Ceramics		ART 220 Ceramics	
ART 231 Graphic Design		ART 231 Graphic Design	
ART 243 Digital Media		ART 243 Digital Media	
ART 250 Printmaking		ART 250 Printmaking	

ART 260 Painting		ART 260 Painting	
ART 270 Sculpture		ART 270 Sculpture	
ART 280 Weaving		ART 280 Weaving	
2 upper-level elective studio courses	6	2 upper-level elective studio courses	6
9 upper-level studio courses in one medium	27	9 upper-level studio courses in one medium	27
ART 432 Portfolio	3	ART 432 Portfolio	3
ART 434 Capstone Seminar	1	ART 434 Capstone Seminar	1
Total semester hours	82	Total semester hours	82

BFA Visual Arts Graphic Design concentration	hours	BFA Visual Arts Graphic Design concentration (proposed)	hours
ART 130 Design	3	ART 130 Design	3
ART 131 3-D Design	3	ART 131 3-D Design	3
ART 140 Drawing	3	ART 140 Drawing	3
ART 240 Drawing	3	ART 240 Drawing	3
ART 340 Drawing	3	ART 340 Drawing	3
ART 341 Drawing	3	ART 341 Drawing	3
ART 440 Drawing or ART 431 Illustration	3	ART 440 Drawing or ART 431 Illustration	3
ART 105 History of Art to 1300	3	ART 105 History of Art to 1300	3
ART 106 History of Art since 1300	3	ART 106 History of Art since 1300	3
2 upper-level elective art history courses selected from the following menu: ART 300, 301, 302, 303, 312, ART 313, 314, 325, 390, 401, 405, 407, 445, 494, PHIL 305	6	2 upper-level elective art history courses selected from the following menu: **ART 305**, 312, 313, 314, **315, 316**, 325, 390, 401, **403**, 405, 407, **408, 409, 410**, 445, 494, PHIL 305	6
Any three of the following basic studios	9	Any three of the following basic studios	9
ART 220 Ceramics		ART 220 Ceramics	
ART 250 Printmaking		ART 250 Printmaking	
ART 260 Painting		ART 260 Painting	
ART 270 Sculpture		ART 270 Sculpture	
ART 280 Weaving		ART 280 Weaving	
2 upper-level elective studio courses	6	2 upper-level elective studio courses	6
ART 231 Graphic Design	3	ART 231 Graphic Design	3
ART 243 Digital Media	3	ART 243 Digital Media	3
ART 330 Graphic Design	3	ART 330 Graphic Design	3
ART 334 Survey of Graphic Design	3	ART 334 Survey of Graphic Design	3
ART 343 Digital Media, Time Based	3	ART 343 Digital Media, Time Based	3
ART 430 Graphic Design	3	ART 430 Graphic Design	3
ART 432 Portfolio	3	ART 432 Portfolio	3
ART 433 Package Design	3	ART 433 Package Design	3
ART 438 Advanced Computer Graphics	3	ART 438 Advanced Computer Graphics	3
Select one course from each of the following pairs		Select one course from each of the following pairs	
ART 331 Visual Thinking or		ART 331 Visual Thinking or	

JOUR 343 Print Design	3	JOUR 343 Print Design	3
ART 436 Electronic Illustration or AMS 308 Graphic Communications	3	ART 436 Electronic Illustration or AMS 308 Graphic Communications	3
ART 434 Capstone Seminar	1	ART 434 Capstone Seminar	1
Total semester hours	82	Total semester hours	82

4. Rationale for the proposed program change:

- New art history offerings overlap the topics covered in ART 300, 301, 302, and 303, rendering them unnecessary courses for our students.
- The department has had a series of art history courses individually approved but neglected to revise the program they were intended to serve. This action will ensure BFA majors are aware of all upper level art history electives available to them via the ICAP audit system.

5. Proposed term for implementation and special provisions (if applicable): 201130

6. Dates of prior committee approvals:

Art Department/Division: 01/31/2011

Potter College Curriculum Committee 03/03/2011

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Program Inventory Form

Proposal Date: 2/16/11

Potter College of Arts & Letters
Department of Communication
Proposal to Revise Course Credit Hours
(Action Item)

Contact Person: Larry Snyder, Lawrence.snyder@wku.edu, x5-3297

1. Identification of course:

1.4 Current course prefix (subject area) and number: COMM 495
1.5 Course title: Independent Study in Communication
1.6 Credit hours: 3.0

2. Proposed course credit hours: Variable 1-6

3. Rationale for the revision of course credit hours: Variable credit provides more flexibility for students in consultation with the faculty to develop research projects, including the Capstone experience.

4. Proposed term for implementation: Spring 2012

5. Dates of prior committee approvals:

Department of Communication:	02/18/2011
Potter College Curriculum Committee:	03/03/2011
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: January 18, 2011

Potter College
Department of Political Science
Proposal to Create a New Course
(Action Item)

Contact Person: Scott Lasley, scott.lasley@wku.edu, 5-2799

1. Identification of proposed course:

1.18 Course prefix (subject area) and number: PS 376
1.19 Course title: Political Management
1.20 Abbreviated course title: Political Management
1.21 Credit hours and contact hours: 3 (3 contact hours per week)
1.22 Type of course: Lecture
1.23 Prerequisites/corequisites: N/A
1.24 Course catalog listing: Applied course with focus on developing skills related to political management including fundraising, issue advocacy, and media strategy.

2. Rationale:

2.11 Reason for developing the proposed course: The creation of this course is a direct response from feedback received from former students who have worked in politics and/or campaigns after graduation from WKU. It also reflects the Department's effort to fulfill the University's mission to prepare productive and engaged leaders for a global society. This course is an extension of PS 375: Fundamentals of Campaign Management. Like PS 375, this course will have more of an applied/vocational focus than most other courses in our Department. The course will allow us to better prepare students for positions in a number of political and non-profit settings. Former students indicate that they would like more coverage of issues related to buying advertising (including television, radio, and print), budgeting and campaign finance, and working with the media. While some of these items have been covered in PS 375, the addition of this course will provide the time to go into more depth over more topics.

2.12 Projected enrollment in the proposed course: 30 (every other year) expected to primarily come from political science majors but may also attract other students interested in politics and non-profit careers. This projection is based on the typical enrollment for PS 375 and the number of students who had selected the campaign management track within the major.

2.13 Relationship of the proposed course to courses now offered by the department: The course would serve as a complement to PS 375: Fundamentals of Political Campaign Management. This course will cover topics that are either not covered in PS 375 or receive limited attention in it. PS 375 covers a wide range of issues related to campaign management. The issues range from candidate entry to campaign strategy. It is simply not possible to give all topics the amount of coverage that is needed. This course (PS 376) will provide the opportunity to expand on several areas that merit further attention than can be afforded in PS

375. These areas include advertising and fundraising/budgeting. This course will also allow coverage of areas (new and online media and issue advocacy) that had received only minimal coverage. In many ways PS 376 will relate to PS 375 similarly to the relationship between Intermediate Accounting I and II. It simply takes two courses to cover the material that students should be exposed to.

2.14 Relationship of the proposed course to courses offered in other departments: There is no similar course offered at WKU. However, there will be elements covered in the course that are covered by other courses. For example, some of the material we will cover under advertising will be covered in more breadth and depth in JOUR 341. We will focus on voter targeting and cover some of the nuts and bolts related to purchasing advertising, but will not cover the techniques of creating advertisements. Likewise, we will introduce strategies to utilize new media as part of electoral and issues campaigns. There is no reason for other departments to be wary of this course. Ideally, many of our students would be able to take courses from other majors to supplement and expand on the material they will be introduced to them in PS 375 and PS 376.

2.15 Relationship of the proposed course to courses offered in other institutions: There are a number of campaign and political management courses and programs offered across the country at the graduate and undergraduate level. They are more common at universities that place an emphasis on applied politics. Examples of schools that have made a commitment to political management majors/minors/tracks include Salisbury, Fort Hays State, George Washington University (particularly at the graduate level), Akron, and Utah. Most schools that offer an applied emphasis on political management supplement more traditional political science offerings with a course or two that explicitly focuses on campaign or political management. For example, Fort Hays State offers a course on political campaign management (660) and an interdisciplinary course on political communication. Utah (3160) offers a course in political management. Akron offers three courses (two campaign management courses and one on campaign finance). I am not aware of any directly equivalent courses at public universities in Kentucky colleges and universities.

3. Discussion of proposed course:

3.9 Course objectives: The primary objective of the course is to provide students an educational background that they will be able to apply in campaign, political, and other non-profit positions. Substantive objectives will evolve with shifting trends in campaigns and politics. Specific objectives include developing an understanding in the following areas:

- Political use of new media
- introduction to lobbying and issue advocacy (how to launch an issue campaign and influence legislators)
- fundraising and budgeting (from campaign finance rules to actual fundraising strategies)
- advertising strategies (including voter targeting, buying advertising, and design)

3.10 Content outline: The core content areas covered in the course will include:

- Voter targeting and mobilization (role and importance of; strategies)
- Fundraising (budgeting; developing and keeping donors; small versus large donors; event planning)
- New media and the Internet (strategies to utilize social media such as Twitter and Facebook; E-mail campaigns; online advertising; web presence)
- Advertising (comparison of media option; developing a campaign; what matters and what doesn't; how to purchase)
- Work of the Congressional Office
- Issue advocacy (lobbying techniques and strategies)

3.11 Student expectations and requirements: In addition to exams, students will develop a portfolio that highlights their work throughout the semester. For each major topic covered during the course, students will complete a project that will become part of their portfolio.

3.12 Tentative texts and course materials: Course Pack based on material and information from best practices and professional political and campaign seminars. The course will also make use of numerous resources available online and case studies which I will develop as the instructor. Textbooks that would be under consideration for use in the course include:

- Levine, Bertram. 2008. *The Art of Lobbying: Building Trust and Selling Policy*. CQ Press: Washington, DC.
- Burton, Michael John and Daniel Shea. 2010. *Campaign Craft: The Strategies, Tactics, and Art of Political Campaign Management, 4th Ed.* Praeger
- Pelosi, Christina. 2007. *Campaign Boot Camp: Basic Training for Future Leaders.* Polipoint Press.

4. Resources:

4.5 Library resources: Library resources are currently not adequate, but they will order all books necessary for the course.

4.6 Computer resources: University resources currently available to students are more than adequate.

5. Budget implications:

5.9 Proposed method of staffing: Existing staff will be used to teach the course.

5.10 Special equipment needed: None

5.11 Expendable materials needed: None

5.12 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Political Science:	02/17/11
Potter College Curriculum Committee	03/03/2011

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Bibliography

Books (Note: Resources considered to be essential resources for students and faculty are marked with *)

*Pelosi, Christina. 2007. *Campaign Boot Camp: Basic Training for Future Leaders.* Polipoint Press.

Levine, Bertram. 2008. *The Art of Lobbying: Building Trust and Selling Policy*. CQ Press: Washington, DC.

Burton, Michael John and Daniel Shea. 2010. *Campaign Craft: The Strategies, Tactics, and Art of Political Campaign Management, 4th Ed.* Praeger

Fusco, Peter. 2008. *Running: How To Design And Execute A Winning Political Campaign.* CreateSpace.

*Faucheux, Ronald. 2003. *Winning Elections: Political Campaign Management, Strategy, & Tactics*. M. Evans and Company.

DeKieffer, Donald. 2007. *The Citizen's Guide to Lobbying Congress*. Chicago Review Press.

*Gelak, Deanna. 2008. *Lobbying and Advocacy: Winning Strategies, Resources, Recommendations, Ethics and Ongoing Compliance for Lobbyists and Washington Advocates: The Best of Everything Lobbying and Washington Advocacy.* TheCapitol.Net, Inc.

*Zetter, Lionel. 2008. *Lobbying: The Art of Political Persuasion.* Harriman House.

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*Green, Donald and Alan Gerber. 2008. *Get Out the Vote, 2nd Edition.* Brookings.

*Barksdale, Brent. 2010. *Winning Political Tips.* Capitol Consulting, Inc.

*McNamara, Michael. 2008. *The Political Campaign Desk Reference: A Guide for Campaign Managers and Candidates Running for Elected Office.* Outskirts Press

Genn, Adina. 2009. *The Everything Guide to Fundraising*. Adams Media.

Panagopoulos, Costas. 2009. *Politicking Online: The Transformation of Election Campaign Communications.* Rutgers University Press

*Malchow, Hal. 2008. *Political Targeting, 2nd Ed.* Predicted Lists, LLC.

Periodicals

**Campaigns & Elections*

Proposal Date: 1/21/2011

Potter College of Arts and Letters
Department of Art
Proposal to Revise A Program
(Action Item)

Contact Person: Brent Oglesbee, brent.oglesbee@wku.edu, 5-6566

1. Identification of program:

1.4 Current program reference number: 514
1.5 Current program title: BFA, Visual Arts
1.6 Credit hours: 82

2. Identification of the proposed program changes:

- Deletion of upper level art history electives ART 300, 301, 302, 303
- Revised listing of upper level art history electives for studio concentration to include: ART 305, 315, 316, 408, 409, 410
- Revised listing of upper level art history electives for graphic design concentration to include: ART 305, 315, 316, 403, 408, 409, 410

3. Detailed program description:

BFA Visual Arts studio concentration	hrs.	BFA Visual Arts studio concentration (proposed)	hrs.
ART 130 Design	3	ART 130 Design	3
ART 131 3-D Design	3	ART 131 3-D Design	3
ART 140 Drawing	3	ART 140 Drawing	3
ART 240 Drawing	3	ART 240 Drawing	3
ART 340 Drawing	3	ART 340 Drawing	3
ART 341 Drawing	3	ART 341 Drawing	3
ART 440 Drawing	3	ART 440 Drawing	3
ART 105 History of Art to 1300	3	ART 105 History of Art to 1300	3
ART 106 History of Art since 1300	3	ART 106 History of Art since 1300	3
2 upper-level elective art history courses selected from the following menu: ART 300, 301, 302, 303, 312, 313, 314, 325, 334, 390, 401, 403, 405, 407, 445, 494, PHIL 305	6	2 upper-level elective art history courses selected from the following menu: **ART 305**, 312, 313, 314, **315, 316,** 325, 334, 390, 401, 403, 405, 407, **408, 409, 410,** 445, 494, PHIL 305	6
Any four of the following basic studios	12	Any four of the following basic studios	12
ART 220 Ceramics		ART 220 Ceramics	
ART 231 Graphic Design		ART 231 Graphic Design	
ART 243 Digital Media		ART 243 Digital Media	
ART 250 Printmaking		ART 250 Printmaking	

ART 260 Painting		ART 260 Painting	
ART 270 Sculpture		ART 270 Sculpture	
ART 280 Weaving		ART 280 Weaving	
2 upper-level elective studio courses	6	2 upper-level elective studio courses	6
9 upper-level studio courses in one medium	27	9 upper-level studio courses in one medium	27
ART 432 Portfolio	3	ART 432 Portfolio	3
ART 434 Capstone Seminar	1	ART 434 Capstone Seminar	1
Total semester hours	82	Total semester hours	82

BFA Visual Arts Graphic Design concentration	hours	BFA Visual Arts Graphic Design concentration (proposed)	hours
ART 130 Design	3	ART 130 Design	3
ART 131 3-D Design	3	ART 131 3-D Design	3
ART 140 Drawing	3	ART 140 Drawing	3
ART 240 Drawing	3	ART 240 Drawing	3
ART 340 Drawing	3	ART 340 Drawing	3
ART 341 Drawing	3	ART 341 Drawing	3
ART 440 Drawing or ART 431 Illustration	3	ART 440 Drawing or ART 431 Illustration	3
ART 105 History of Art to 1300	3	ART 105 History of Art to 1300	3
ART 106 History of Art since 1300	3	ART 106 History of Art since 1300	3
2 upper-level elective art history courses selected from the following menu: ART 300, 301, 302, 303, 312, ART 313, 314, 325, 390, 401, 405, 407, 445, 494, PHIL 305	6	2 upper-level elective art history courses selected from the following menu: **ART 305**, 312, 313, 314, **315, 316**, 325, 390, 401, **403**, 405, 407, **408, 409, 410**, 445, 494, PHIL 305	6
Any three of the following basic studios	9	Any three of the following basic studios	9
ART 220 Ceramics		ART 220 Ceramics	
ART 250 Printmaking		ART 250 Printmaking	
ART 260 Painting		ART 260 Painting	
ART 270 Sculpture		ART 270 Sculpture	
ART 280 Weaving		ART 280 Weaving	
2 upper-level elective studio courses	6	2 upper-level elective studio courses	6
ART 231 Graphic Design	3	ART 231 Graphic Design	3
ART 243 Digital Media	3	ART 243 Digital Media	3
ART 330 Graphic Design	3	ART 330 Graphic Design	3
ART 334 Survey of Graphic Design	3	ART 334 Survey of Graphic Design	3
ART 343 Digital Media, Time Based	3	ART 343 Digital Media, Time Based	3
ART 430 Graphic Design	3	ART 430 Graphic Design	3
ART 432 Portfolio	3	ART 432 Portfolio	3
ART 433 Package Design	3	ART 433 Package Design	3
ART 438 Advanced Computer Graphics	3	ART 438 Advanced Computer Graphics	3
Select one course from each of the following pairs		Select one course from each of the following pairs	
ART 331 Visual Thinking or		ART 331 Visual Thinking or	

JOUR 343 Print Design	3	JOUR 343 Print Design	3
ART 436 Electronic Illustration or AMS 308 Graphic Communications	3	ART 436 Electronic Illustration or AMS 308 Graphic Communications	3
ART 434 Capstone Seminar	1	ART 434 Capstone Seminar	1
Total semester hours	82	Total semester hours	82

4. Rationale for the proposed program change:

- New art history offerings overlap the topics covered in ART 300, 301, 302, and 303, rendering them unnecessary courses for our students.
- The department has had a series of art history courses individually approved but neglected to revise the program they were intended to serve. This action will ensure BFA majors are aware of all upper level art history electives available to them via the ICAP audit system.

5. Proposed term for implementation and special provisions (if applicable): 201130

6. Dates of prior committee approvals:

Art Department/Division: 01/31/2011

Potter College Curriculum Committee 03/03/2011

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Program Inventory Form

Proposal Date: February 16, 2011

Ogden College of Science and Engineering
Department of Geography and Geology
Proposal to Revise Course Prerequisites
(Action Item)

Contact Person: Jason Polk (Jason.polk@wku.edu) 5-5105

1. Identification of course:
1.25 Course prefix (subject area) and number: GEOG 310
1.26 Course title: Global Hydrology
1.27 Credit hours: 3

2. Current prerequisites: None

3. Proposed prerequisites: GEOG 100, or GEOL 102, or GEOL 111

4. Rationale for the revision of prerequisites: A new course (GEOG 461) has been developed to support a new concentration in karst geoscience within the geography #674 major. This course requires GEOG 310 (or GEOG 459) and 420 as prerequisites. As these courses are designed to be taken in sequence, it is appropriate that GEOG 310 has a foundational earth science course as a prerequisite, thus maintaining an appropriate sequence of material.

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

6. Proposed term for implementation: Spring 2012

7. Dates of prior committee approvals:

Department of Geography and Geology ____2/23/2011_____

Ogden College Curriculum Committee ____3/3/2011_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Course Inventory Form

Proposal Date: February 16, 2011

Ogden College of Science and Engineering
Department of Geography and Geology
Proposal to Revise Course Prerequisites
(Consent Item)

Contact Person: Jason Polk (Jason.polk@wku.edu) 5-5105

1. Identification of course:
- 1.1 Course prefix (subject area) and number: GEOL 310
- 1.2 Course title: Global Hydrology
- 1.3 Credit hours: 3

2. Current prerequisites: None

3. Proposed prerequisites: GEOG 100, or GEOL 102, or GEOL 111

4. Rationale for the revision of prerequisites: A new course (GEOG 461) has been developed to support a new concentration in karst geoscience within the geography #674 major. This course requires GEOG 310 (cross-listed with GEOL 310) or GEOG 459, and GEOG or GEOL 420, as prerequisites. As these courses are designed to be taken in sequence, it is appropriate that GEOL 310 has a foundational earth science course as a prerequisite, thus maintaining an appropriate sequence of material.

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

6. Proposed term for implementation: Spring 2012

7. Dates of prior committee approvals:

Department of Geography and Geology	____2/23/2011_____
Ogden College Curriculum Committee	____3/3/2011_____
Undergraduate Curriculum Committee	____3/24/2011_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: 2/16/2011

Ogden College of Science and Engineering
Department of Chemistry
Proposal to Revise Course Prerequisites/Corequisites
(Action Item)

Contact Person: Kevin Williams, kevin.williams@wku.edu, 5-8899

1. Identification of course:
- 1.1 Course prefix (subject area) and number: CHEM 314
- 1.2 Course title: Introduction to Organic Chemistry
- 1.3 Credit hours: 5

2. Current prerequisites: CHEM 222/223

3. Proposed prerequisites: CHEM 222/223 or permission of instructor.

4. Rationale for the revision of prerequisites/corequisites/special requirements: There may be special circumstances (for example, students interested in a proposed nutritional chemistry minor) in which students who would like to take a course in organic chemistry have taken a non-major focused chemistry sequence such as CHEM 105/106/107/108 or CHEM 109. Revision of the prerequisite will indicate to these students that enrollment in CHEM 314 will be possible on a case-by-case consideration.

5. Effect on completion of major/minor sequence: The chemistry major and minor sequences are unaffected, although this adds a possible elective to the nutritional chemistry minor that is being planned.

6. Proposed term for implementation : Spring 2012

7. Dates of prior committee approvals:

Chemistry Department:	__February 18, 2011__
Ogden College Curriculum Committee	__March 3, 2011_____
Professional Education Council	__March 16, 2011____
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: 01/17/2011

Ogden College of Science and Engineering
Department of Mathematics and Computer Science
Proposal to Revise Course Prerequisites/Co requisites
(Consent Item)

Contact Person: Mikhail Khenner, mikhail.khenner@wku.edu, 745-2797

1. Identification of course:

1.1 Course prefix (subject area) and number: MATH 307
1.2 Course title: Introduction to Linear Algebra
1.3 Credit hours: 3

2. Current prerequisites/corequisites/special requirements: MATH 137

3. Proposed prerequisites/corequisites/special requirements:
Prerequisite: MATH 136 with grade of C or higher. Prerequisite/corequisite: PHIL 215 or EE 180 with a grade of C or higher

4. Rationale for the revision of prerequisites/corequisites/special requirements:
The subject content of MATH 137 (Calculus II) is not relevant to the content of MATH 307, and the mathematical concepts and skills that students acquire in MATH 137 do not contribute to success in MATH 307. By changing the prerequisite from MATH 137 to MATH 136 (Calculus I) with a grade of C or better, students will be able to take MATH 307 and MATH 137 concurrently. Moreover, this change of prerequisite will allow students to enroll in two mathematics courses one semester earlier than is currently the case. PHIL 215 (Elementary Logic) or EE 180 (Digital Circuits) provides solid background in logic that the students in mathematics currently lack. The ability to construct formal logical arguments is very helpful in MATH 307. The PHIL 215 or EE 180 will also improve the general mathematical maturity of the students taking MATH 307.

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

6. Proposed term for implementation: Spring 2012

7. Dates of prior committee approvals:

Mathematics and Computer Science Department	2-18-11
Ogden College Curriculum Committee	3-3-11
Professional Education Council	3-16-11
Undergraduate Curriculum Committee	3-24-11
University Senate	

Attachment: Course Inventory Form

Proposal Date: 2-3-2011

Ogden College of Science and Engineering
Department of Architectural and Manufacturing Sciences
Proposal to Revise Course Title
(Consent Item)

Contact Person: Bryan Reaka, bryan.reaka@wku.edu, 745.7032

1. Identification of course:
- 1.1 Current course prefix (subject area) and number: AMS 217
- 1.2 Current course title: Materials for Manufacturing
- 1.3 Credit hours: 3

2. Proposed course title: Industrial Materials

3. Proposed abbreviated course title:
Industrial Materials

4. Rationale for the revision of course title:
Better reflects the cross disciplinary aspect of the content for the course.

5. Proposed term for implementation: Spring 2012

6. Dates of prior committee approvals:

AMS Department/Division: _____2-4-11_____

OCSE Curriculum Committee _____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Course Inventory Form

Proposal Date: 1/27/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.4 Course prefix (subject area) and number: WTTI 201
1.5 Course title: Hydrology for Water Operations
1.6 Abbreviated course title: Hydro for Wtr Oper
1.7 Credit hours and contact hours: 0.5
1.8 Type of course: Lecture
1.9 Prerequisites/corequisites: None
1.10 Course catalog listing: The properties, distribution, and circulation of water and its components as it moves through the atmosphere, across and below the earth's surface, with an emphasis on how it pertains to water and wastewater operations. Concepts discussed include the hydrologic cycle, groundwater, rainfall, droughts, and volume and flow.

2. Rationale:

2.16 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.17 Projected enrollment in the proposed course: 20 students/yr
2.18 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 200 – Water Supply and Wastewater Control.
2.19 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 200: Water Supply and Wastewater Control, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.20 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.13 Course objectives: Upon completing this course, students will be able to:

- Identify various sources of water
- Evaluate the impacts of the hydrologic cycle on water availability

3.14 Content outline:

- The Hydrologic Cycle
- Groundwater
- Surface Water
- Volume and Flow
- Water Use and Availability
- Rainfall
- Droughts

3.15 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.16 Tentative texts and course materials:

- Basic Environmental Technology: Water Supply, Waste Management, & Pollution Control, Fifth Edition, Jerry A. Nathanson.
- WSO: Water Sources, Fourth Edition, American Water Works Association.

4. Resources:

4.7 Library resources: No new library resources needed.

4.8 Computer resources: No new computer resources needed.

5. Budget implications:

5.13 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.14 Special equipment needed: None

5.15 Expendable materials needed: None

5.16 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Professional Education Council (if applicable) _____

General Education Committee (if applicable) _____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/26/2011

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.11 Course prefix (subject area) and number: WTTI 202
1.12 Course title: Drinking Water Sources, Quality & Standards
1.13 Abbreviated course title: DW Srces, Qlty & Stndrds
1.14 Credit hours and contact hours: 0.75
1.15 Type of course: Lecture
1.16 Prerequisites/corequisites: None
1.17 Course catalog listing: Examination of the various sources of drinking water, as well as the quality and standards which go in to producing it. Identification of the various types and sources of contaminants in both natural and artificial water systems, as well as the standards used to establish drinking water quality.

2. Rationale:

2.21 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.22 Projected enrollment in the proposed course: 20 students/yr
2.23 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 200 – Water Supply and Wastewater Control
2.24 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 200: Water Supply and Wastewater Control, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.25 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.17 Course objectives: Upon completing this course, students will be able to:

- Identify various types of contaminants in both natural and artificial water systems
- Identify the standards used to define water quality

3.18 Content outline:

- Water Quality
- Water Pollution
- Groundwater Sources
- Surface Water Sources
- Public Water Supply Regulations
- Microbiological Contaminants
- Inorganic Chemicals
- Organic Contaminants
- Radiological Contaminants

3.19 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.20 Tentative texts and course materials:

- Basic Environmental Technology: Water Supply, Waste Management, & Pollution Control, Fifth Edition, Jerry A. Nathanson.
- Principles and Practices of Water Supply Operations: Water Sources, Fourth Edition, American Water Works Association.
- Principles and Practices of Water Supply Operations: Water Quality, Fourth Edition, American Water Works Association.

4. Resources:

4.9 Library resources: No new library resources needed.

4.10 Computer resources: No new computer resources needed.

5. Budget implications:

5.17 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.18 Special equipment needed: None

5.19 Expendable materials needed: None

5.20 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/26/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.18 Course prefix (subject area) and number: WTTI 203
1.19 Course title: Introduction to Drinking Water Treatment
1.20 Abbreviated course title: Intro Drink Water Treat
1.21 Credit hours and contact hours: 0.5
1.22 Type of course: Lecture
1.23 Prerequisites/corequisites: None
1.24 Course catalog listing: Introduction to the processes used in creating safe drinking water. Examination of various water treatment processes, including treatment at the source, preliminary drinking water treatment, and drinking water purification. Recognition of the importance of these processes and be ability to identify the equipment and structures utilized in them.

2. Rationale:

2.26 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.27 Projected enrollment in the proposed course: 20 students/yr
2.28 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 200 – Water Supply and Wastewater Control
2.29 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 200: Water Supply and Wastewater Control, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.30 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.21 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of water distribution systems;

- Identify the equipment and structures used in drinking water transmission and distribution systems; and
- Recognize the design factors involved in planning a water distribution system.

3.22 Content outline:

- Water Treatment Processes
- Treatment of Water at the Source
- Preliminary Treatment
- Drinking Water Purification

3.23 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.24 Tentative texts and course materials:

- Basic Environmental Technology: Water Supply, Waste Management, & Pollution Control, Fifth Edition, Jerry A. Nathanson.
- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.
- Water & Wastewater Treatment: A Guide for the Non-Engineering Professional, American Water Works Association, Joanne E. Drinan.

4. Resources:

4.11 Library resources: No new library resources needed.

4.12 Computer resources: No new computer resources needed.

5. Budget implications:

5.21 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.22 Special equipment needed: None

5.23 Expendable materials needed: None

5.24 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/27/2011

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.25 Course prefix (subject area) and number: WTTI 204
1.26 Course title: Introduction to Wastewater Treatment
1.27 Abbreviated course title: Intro WW Treatment
1.28 Credit hours and contact hours: 0.5
1.29 Type of course: Lecture
1.30 Prerequisites/corequisites: None
1.31 Course catalog listing: Introduction to the equipment, structures, and processes used in the treatment of wastewater. Examination various legislation and regulations pertaining to wastewater treatment and effluent standards. Other topics will include the processes utilized in wastewater treatment and the equipment and structures utilized for these.

2. Rationale:

2.31 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.32 Projected enrollment in the proposed course: 20 students/yr
2.33 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 200 – Water Supply and Wastewater Control
2.34 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 200: Water Supply and Wastewater Control, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.35 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.25 Course objectives: Upon completing this course, students will be able to:

- Identify the types of wastewater treatment which are performed
- Identify the equipment and structures used in wastewater treatment

3.26 Content outline:

- Legislation and standards
- Preliminary and Primary Treatment
- Secondary (Biological) Treatment
- Tertiary (Advanced) Treatment
- On-Site (Decentralized) Wastewater Treatment and Disposal
- Sludge (Biosolids) Management
- Operation and Maintenance

3.27 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.28 Tentative texts and course materials:

- Basic Environmental Technology: Water Supply, Waste Management, & Pollution Control, Fifth Edition, Jerry A. Nathanson.
- Operation of Wastewater Treatment Plants, Volume I, Seventh Edition, California State University, Sacramento.
- Water & Wastewater Treatment: A Guide for the Non-Engineering Professional, American Water Works Association, Joanne E. Drinan.

4. Resources:

4.13 Library resources: No new library resources needed.

4.14 Computer resources: No new computer resources needed.

5. Budget implications:

5.25 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.26 Special equipment needed: None

5.27 Expendable materials needed: None

5.28 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/27/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.32 Course prefix (subject area) and number: WTTI 205
1.33 Course title: Introduction to Drinking Water Distribution
1.34 Abbreviated course title: Intro Drink Water Distrib
1.35 Credit hours and contact hours: 0.5
1.36 Type of course: Lecture
1.37 Prerequisites/corequisites: None
1.38 Course catalog listing: Introduction to the equipment and structural factors used in drinking water transmission and distribution systems. Topics in the course will consider the layout and maintenance of the distribution systems, as well as the various types of equipment and structures utilized in them such as centrifugal pump and water mains. Other topics will include flow and pressure within the systems and computer applications.

2. Rationale:

2.36 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.37 Projected enrollment in the proposed course: 20 students/yr
2.38 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 200 – Water Supply & Wastewater Control.
2.39 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 200: Water Supply and Wastewater Control, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.40 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.29 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of water distribution systems;

- Identify the equipment and structures used in drinking water transmission and distribution systems; and
- Recognize the design factors involved in planning a water distribution system.

3.30 Content outline:

- System Purpose and Planning
- Design Factors
- Water Mains
- Centrifugal Pumps
- Distribution Storage
- Flow in Pipe Networks
- Computer Applications

3.31 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.32 Tentative texts and course materials:

- Basic Environmental Technology: Water Supply, Waste Management, & Pollution Control, Fifth Edition, Jerry A. Nathanson.
- Principles and Practices of Water Supply Operations: Water Transmission and Distribution, Fourth Edition, American Water Works Association.

4. Resources:

4.15 Library resources: No new library resources needed.

4.16 Computer resources: No new computer resources needed.

5. Budget implications:

5.29 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.30 Special equipment needed: None

5.31 Expendable materials needed: None

5.32 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/27/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.39 Course prefix (subject area) and number: WTTI 206
1.40 Course title: Introduction to Wastewater Collection
1.41 Abbreviated course title: Intro Waste Water Collect
1.42 Credit hours and contact hours: 0.5
1.43 Type of course: Lecture
1.44 Prerequisites/corequisites: None
1.45 Course catalog listing: Introduction to the equipment, structures, and design factors used in wastewater collection systems. Topics include the layout and construction of sanitary sewers, lift stations, infiltration and inflow, and treatment methods and alternatives treatment considerations. After completion of this course, students will be able to identify the purpose of wastewater collection systems and indentify the equipment and structures utilized in the process.

2. Rationale:

2.41 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.42 Projected enrollment in the proposed course: 20 students/yr
2.43 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 200 – Water Supply & Wastewater Control.
2.44 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 200: Water Supply and Wastewater Control, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.45 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.33 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of wastewater collection systems.

- Identify the equipment and structures used in wastewater collection systems.
- Recognize the design factors involved in planning a wastewater collection system.

3.34 Content outline:

- Sanitary Sewer Design
- Sewage Lift Stations
- Sewer Construction
- Infiltration and Inflow
- Sewer Rehabilitation
- Alternative Wastewater Collection Systems
- Computer Applications and Geographic Information Systems

3.35 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.36 Tentative texts and course materials:

- Basic Environmental Technology: Water Supply, Waste Management, & Pollution Control, Fifth Edition, Jerry A. Nathanson.
- Operation and Maintenance of Wastewater Collection Systems, Volume I, 6th edition, California State University, Sacramento.

4. Resources:

4.17 Library resources: No new library resources needed.

4.18 Computer resources: No new computer resources needed.

5. Budget implications:

5.33 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.34 Special equipment needed: None

5.35 Expendable materials needed: None

5.36 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/27/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.46 Course prefix (subject area) and number: WTTI 213
1.47 Course title: Basic Drinking Water Treatment Processes
1.48 Abbreviated course title: Basic Water Treatment Proc
1.49 Credit hours and contact hours: 0.75
1.50 Type of course: Lecture
1.51 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment
1.52 Course catalog listing: Outline of the effects of several characteristics of water that hinder quality and treatment techniques which improve water quality. Topics include fluoridation process and control, iron and manganese control and treatment, and hard water treatment and control. Upon completion of course the student will be able to understand these processes and to identify structures and equipment utilized in them.

2. Rationale:

2.46 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.47 Projected enrollment in the proposed course: 20 students/yr
2.48 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 210 – Introduction to Water Treatment
2.49 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 210: Introduction to Water Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.50 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.37 Course objectives: Upon completing this course, students will be able to:

- Understand the use of the Fluoridation process

- Understand the use of Iron and Manganese control processes
- Understand the effects of Iron and Manganese in water
- Understand the use of the Softening process
- Understand the effects of hard water

3.38 Content outline:

- Fluoridation Process Description
- Fluoridation Facilities
- Fluoridation Regulations
- Operation of the Fluoridation Process
- Fluoridation Operating Problems
- Fluoridation Control Tests
- Fluoridation Safety Precautions
- Fluoridation Record Keeping
- Excessive Iron and Manganese
- Iron and Manganese Control Processes
- Iron and Manganese Control Facilities
- Iron and Manganese Regulations
- Iron and Manganese Control Process Operation
- Iron and Manganese Record Keeping
- Operation of the Lime-Soda Ash Process
- Effects of Hard and Soft Water
- Softening Processes
- Softening Facilities
- Softening Regulations
- Softening Safety Precautions
- Softening Record Keeping

3.39 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.40 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.19 Library resources: No new library resources needed.

4.20 Computer resources: No new computer resources needed.

5. Budget implications:

5.37 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.38 Special equipment needed: None

5.39 Expendable materials needed: None

5.40 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/27/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.53 Course prefix (subject area) and number: WTTI 214
1.54 Course title: Coagulation and Flocculation Processes in Water Treatment
1.55 Abbreviated course title: Coagltn & Flocltn in Wtr Treat
1.56 Credit hours and contact hours: 0.5
1.57 Type of course: Lecture
1.58 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment or WTTI 204: Introduction to Wastewater Treatment
1.59 Course catalog listing: Examination of the processes charged with removing suspended solids from drinking water and wastewater. Topics include chemicals used, rapid-mix facilities, flocculation facilities, regulations, dosage control, safety precautions, and record keeping. Upon completion the student will be able to identify the steps of the coagulation and flocculation process and the facilities and equipment utilized in them.

2. Rationale:

2.51 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.52 Projected enrollment in the proposed course: 20 students/yr
2.53 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 210 – Introduction to Water Treatment and WTTI 211 – Introduction to Wastewater Treatment.
2.54 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 210: Introduction to Water Treatment and WTTI 211: Introduction to Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.55 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.41 Course objectives: Upon completing this course, students will be able to:

- Identify the steps associated with the coagulation and flocculation processes
- Identify the types of facilities utilized for coagulation and flocculation processes
- Recognize the chemicals used for coagulation and flocculation

3.42 Content outline:

- Process Description
- Coagulant Chemicals and Feed Equipment
- Chemical Purchasing, Receiving, and Quality Control
- Rapid-Mix Facilities
- Flocculation Facilities
- Regulations
- Operation of the Processes
- Dosage Control
- Safety Precautions
- Record Keeping

3.43 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.44 Tentative texts and course materials:

- Water Treatment Plant Operation, Vol. 1, Sixth edition, California State University, Sacramento.
- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.21 Library resources: No new library resources needed.

4.22 Computer resources: No new computer resources needed.

5. Budget implications:

5.41 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.42 Special equipment needed: None

5.43 Expendable materials needed: None

5.44 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: 1/27/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.60 Course prefix (subject area) and number: WTTI 215
1.61 Course title: Sedimentation Basins and Clarifiers in Water Treatment
1.62 Abbreviated course title: Sed Basins & Clarifiers
1.63 Credit hours and contact hours: 0.5
1.64 Type of course: Lecture
1.65 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment or WTTI 204: Introduction to Wastewater Treatment
1.66 Course catalog listing: Examination of the processes charged with removing suspended solids from drinking water and wastewater. Topics include chemicals used, rapid-mix facilities, flocculation facilities, regulations, dosage control, safety precautions, and record keeping. Upon completion the student will be able to identify the steps of the coagulation and flocculation process and the facilities and equipment utilized in them.

2. Rationale:

2.56 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.57 Projected enrollment in the proposed course: 20 students/yr
2.58 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 210 – Introduction to Water Treatment and WTTI 211 – Introduction to Wastewater Management
2.59 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 210: Introduction to Water Treatment and WTTI 211: Introduction to Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.60 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.45 Course objectives: Upon completing this course, students will be able to:

- Identify why sedimentation basins and clarifiers are used.
- Comprehend the process of sedimentation
- Understand the process of operating a sedimentation basin or other clarifier.

3.46 Content outline:

- Sedimentation Basins and Clarifiers Process
- Sedimentation Facilities
- Other Clarification Processes
- Sedimentation Basin and Clarifier Regulations
- Operating Sedimentation Basins and Clarifiers
- Record Keeping and Sedimentation Basins and Clarifiers

3.47 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.48 Tentative texts and course materials:

- Water Treatment Plant Operation, Vol. 1, Sixth Edition, California State University, Sacramento.
- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.23 Library resources: No new library resources needed.

4.24 Computer resources: No new computer resources needed.

5. Budget implications:

5.45 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.46 Special equipment needed: None

5.47 Expendable materials needed: None

5.48 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/27/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.67 Course prefix (subject area) and number: WTTI 216
1.68 Course title: Water Filtration Processes
1.69 Abbreviated course title: Water Filtration Proc
1.70 Credit hours and contact hours: 0.5
1.71 Type of course: Lecture
1.72 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment or WTTI 204: Introduction to Wastewater Treatment
1.73 Course catalog listing: Exploration of the equipment, structures, and operational factors used in filtration systems for water and wastewater treatment facilities. Topics include approaches to filtration, gravity filters, pressure filtration, filtration regulations, filtration safety precautions, and record keeping. Completion of this course will prepare the student to operate filtration processes and identify the equipment and structures utilized in the filtration process.

2. Rationale:

2.61 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.62 Projected enrollment in the proposed course: 20 students/yr
2.63 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 210 – Introduction to Water Treatment and WTTI 211 – Introduction to Wastewater Treatment.
2.64 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 210: Introduction to Water Treatment and WTTI 211: Introduction to Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.65 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.49 Course objectives: Upon completing this course, students will be able to:

- Understand the filtration process
- Understand the process of gravity filtration
- Understand the process of pressure filtration

3.50 Content outline:

- The Filtration Process
- Approaches to Filtration
- Types of Gravity Filters
- Equipment Associated with Gravity Filters
- Filter Control Equipment
- Operation of Gravity Filters
- Pressure Filtration
- Filtration Regulations
- Filtration Safety Precautions
- Filtration Record Keeping

3.51 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.52 Tentative texts and course materials:

- Water Treatment Plant Operation, Vol. 1, Sixth Edition, California State University, Sacramento.
- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.25 Library resources: No new library resources needed.

4.26 Computer resources: No new computer resources needed.

5. Budget implications:

5.49 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.50 Special equipment needed: None

5.51 Expendable materials needed: None

5.52 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/27/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.74 Course prefix (subject area) and number: WTTI 217
1.75 Course title: Water Disinfection Processes
1.76 Abbreviated course title: Water Disinfection Proc
1.77 Credit hours and contact hours: 1
1.78 Type of course: Lecture
1.79 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment and WTTI 204: Introduction to Wastewater Treatment
1.80 Course catalog listing: Investigation of the equipment, structures, and processes used during the disinfection process of water and wastewater treatment. Topics include chlorination processes, other oxidant processes, disinfection regulations, control tests, safety precautions, and record keeping. Upon completion a student will be able to identify the reasons for disinfection of drinking water and wastewater, several different methods of disinfection, and the facilities and processes utilized in the disinfection process.

2. Rationale:

2.66 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.67 Projected enrollment in the proposed course: 20 students/yr
2.68 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 210 – Introduction to Water Treatment and WTTI 211 – Introduction to Wastewater Treatment.
2.69 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 210: Introduction to Water Treatment and WTTI 211: Introduction to Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.70 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.53 Course objectives: Upon completing this course, students will be able to:

- Identify the reasons for disinfection
- Discuss several disinfection methods
- Properly utilize several disinfection methods

3.54 Content outline:

- Destroying Pathogens in Water
- Gas Chlorination Facilities
- Hypochlorination Facilities
- Facilities for Other Oxidants
- Disinfection Regulations
- Operation of the Chlorination Process
- Chlorination Operating Problems
- Disinfection Control Tests
- Disinfection Safety Precautions
- Disinfection Record Keeping

3.55 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.56 Tentative texts and course materials:

- Water Treatment Plant Operation, Vol. I, Sixth Edition, California State University, Sacramento.
- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.27 Library resources: No new library resources needed.

4.28 Computer resources: No new computer resources needed.

5. Budget implications:

5.53 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.54 Special equipment needed: None

5.55 Expendable materials needed: None

5.56 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.81 Course prefix (subject area) and number: WTTI 223
1.82 Course title: Basic Calculations for Water Operations
1.83 Abbreviated course title: Bas Calc Water Oper
1.84 Credit hours and contact hours: 1.25
1.85 Type of course: Lecture
1.86 Prerequisites/corequisites: None
1.87 Course catalog listing: Investigation of the various mathematical methods used by operators to determine load, demand, and various other concepts critical to water and wastewater operations. Topics include per capita water use, domestic water use based on household fixture rates, water use per unit of industrial product produced, demand analysis, and load estimation. With completion of this course the student will be able to utilize various calculation techniques to estimate load and demand and recognize the importance of accurate calculation in the water and wastewater industries.

2. Rationale:

2.71 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.72 Projected enrollment in the proposed course: 20 students/yr
2.73 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 220 – Calculations and Hydraulics for Water and WTTI 221 – Calculations and Hydraulics for Wastewater
2.74 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 220: Calculations & Hydraulics for Water and WTTI 221: Calculations & Hydraulics for Wastewater, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.75 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.57 Course objectives: Upon completing this course, students will be able to:

- Utilize various calculation techniques to estimate load and demand
- Understand various notations of mathematical concepts; and
- Recognize the importance of calculation to the water and wastewater industry.

3.58 Content outline:

- Powers and Scientific Notation
- Per Capita Water Use
- Domestic Water Use Based on Household Fixture Rates
- Water Use per Unit of Industrial Product Produced
- Demand Analysis
- Load Estimation

3.59 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.60 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Basic Science Concepts and Applications, Fourth Edition, American Water Works Association.
- Principles and Practices of Water Supply Operations: Basic Science Concepts and Applications Workbook, Fourth Edition, American Water Works Association.
- Essential Water and Wastewater Calculations for Engineers and Operators, First Edition, MWH Soft, John W. Nicklow and Paul F. Boulos.

4. Resources:

4.29 Library resources: No new library resources needed.

4.30 Computer resources: No new computer resources needed.

5. Budget implications:

5.57 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.58 Special equipment needed: None

5.59 Expendable materials needed: None

5.60 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences:	____2-18-11_____
Ogden College Curriculum Committee	_____3-3-11_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.88 Course prefix (subject area) and number: WTTI 224
1.89 Course title: Basic Hydraulics for Water Operations
1.90 Abbreviated course title: Basic Hydrau Water Oper
1.91 Credit hours and contact hours: 1
1.92 Type of course: Lecture
1.93 Prerequisites/corequisites: None
1.94 Course catalog listing: Investigation of the basic hydraulic concepts and calculations necessary for operating water and wastewater systems. Topics include basic properties of fluids, pressure and force, head and head loss, pumping calculations, flow, thrust control, and computer applications.

2. Rationale:

2.76 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.77 Projected enrollment in the proposed course: 20 students/yr
2.78 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 220 – Calculations and Hydraulics for Water and WTTI 221 –Calculations and Hydraulics for Wastewater.
2.79 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 220: Calculations & Hydraulics for Water and WTTI 221: Calculations & Hydraulics for Wastewater, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.80 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.61 Course objectives: Upon completing this course, students will be able to:

- Utilize various mathematical hydraulic concepts; and

- Apply various mathematical hydraulic concepts.

3.62 Content outline:

- Density and Specific Gravity
- Pressure and Force
- Piezometric Surface and Hydraulic Grade Line
- Head
- Head Loss
- Pumping Problems
- Flow Rate Problems
- Thrust Control
- Fluid Properties
- Flow
- Flow in Pipes Under Pressure
- Gravity Flow in Pipes
- Nonuniform Open Channel Flow
- Computer Applications in Hydraulics

3.63 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.64 Tentative texts and course materials:

- Basic Environmental Technology: Water Supply, Waste Management, & Pollution Control, Fifth Edition, Jerry A. Nathanson.
- Principles and Practices of Water Supply Operations: Basic Science Concepts and Applications, Fourth Edition, American Water Works Association.
- Essential Water and Wastewater Calculations, First Edition, MWH Soft, John W. Nicklow and Paul F. Boulos.

4. Resources:

4.31 Library resources: No new library resources needed.

4.32 Computer resources: No new computer resources needed.

5. Budget implications:

5.61 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.62 Special equipment needed: None

5.63 Expendable materials needed: None

5.64 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences:	____2-18-11_____
Ogden College Curriculum Committee	_____3-3-11_____
Undergraduate Curriculum Committee	_____
University Senate	_____

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

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.95 Course prefix (subject area) and number: WTTI 225
1.96 Course title: Basic Hydraulic Concepts in Drinking Water Distribution Networks
1.97 Abbreviated course title: Basic Hydrau in DW Distri
1.98 Credit hours and contact hours: 0.5
1.99 Type of course: Lecture
1.100 Prerequisites/corequisites: WTTI 223: Basic Calculations for Water Operations and WTTI 224: Basic Hydraulics for Water Operations
1.101 Course catalog listing: Course examining the basic hydraulic concepts driving the operation of water distribution networks. Upon completion the student will understand the purpose, function, and operation of pressurized water transmission networks; the equipment and structures utilized in pressurized networks; and recognize the operating factors affecting the planning, design and construction of a pressurized network.

2. Rationale:

2.81 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.82 Projected enrollment in the proposed course: 20 students/yr
2.83 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 220 – Calculations & Hydraulics for Water
2.84 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 220: Calculations & Hydraulics for Water, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.85 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.65 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of pressurized flow in water distribution systems;
- Identify the equipment and structures used in pressurized flow networks and
- Recognize the design factors involved in planning a pressurized network.

3.66 Content outline:

- Hydraulics of Pipe Flow
- Hydraulics of the System
- Network Analysis
- Hydraulic Transients: Water Hammer

3.67 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.68 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Transmission and Distribution, Fourth Edition, American Water Works Association.

4. Resources:

4.33 Library resources: No new library resources needed.

4.34 Computer resources: No new computer resources needed.

5. Budget implications:

5.65 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.66 Special equipment needed: None

5.67 Expendable materials needed: None

5.68 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.102 Course prefix (subject area) and number: WTTI 227
1.103 Course title: Basic Hydraulic Concepts in Wastewater Collection Systems
1.104 Abbreviated course title: Basic Hydraulic Concepts
1.105 Credit hours and contact hours: 0.5
1.106 Type of course: Lecture
1.107 Prerequisites/corequisites: WTTI 223: Basic Calculations for Water Operations and WTTI 224: Basic Hydraulics for Water Operations
1.108 Course catalog listing: Course examining the basic hydraulic concepts driving the operation of wastewater collection systems. Upon completion the student will understand the purpose, function and operation of open channel and gravity flow collection system networks; the equipment and structures utilized in these systems; and recognize the operating factors affecting the planning, design, and construction of wastewater collection systems.

2. Rationale:

2.86 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.87 Projected enrollment in the proposed course: 20 students/yr
2.88 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 221 – Calculations and Hydraulics for Wastewater
2.89 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 221: Calculations & Hydraulics for Wastewater, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.90 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.69 Course objectives: Upon completing this course, students will be able to:

- Understand various hydraulic concepts which deal with open channels; and
- Apply various hydraulic concepts which deal with open channels.

3.70 Content outline:

- Specific Energy
- Critical Flow
- Flow Transitions
- Resistance to Flow
- Uniform Flow
- Gradually-Varied Flow
- Form Losses
- Hydraulic Jump

3.71 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.72 Tentative texts and course materials:

- Essential Water and Wastewater Calculations for Engineers and Operators, First Edition, MWH Soft, John W. Nicklow and Paul F. Boulos.

4. Resources:

4.35 Library resources: No new library resources needed.

4.36 Computer resources: No new computer resources needed.

5. Budget implications:

5.69 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.70 Special equipment needed: None

5.71 Expendable materials needed: None

5.72 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/27/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.109 Course prefix (subject area) and number: WTTI 232
1.110 Course title: Wastewater Microbiology
1.111 Abbreviated course title: WW Microbiology
1.112 Credit hours and contact hours: 0.5
1.113 Type of course: Lecture
1.114 Prerequisites/corequisites: WTTI 204: Introduction to Wastewater Treatment
1.115 Course catalog listing: Course examining the bacteria and other microscopic organisms in wastewater. Upon completion the student will be able to identify the types of microorganisms' present in wastewater, the equipment and structures used to grow or remove microorganisms, and understand the role microorganisms play in the breakdown of waste material.

2. Rationale:

2.91 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.92 Projected enrollment in the proposed course: 20 students/yr
2.93 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 211 – Introduction to Wastewater Treatment
2.94 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 211: Introduction to Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.95 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.73 Course objectives: Upon completing this course, students will be able to:

- Identify the different types of microorganisms present in wastewater
- Identify the equipment and structures used to eliminate microorganisms

- Understand the role microorganisms play in the breakdown of waste material

3.74 Content outline:

- Types of Microorganisms
- Uses of Microorganisms
- Anatomy of Microorganisms
- Eliminating Microorganisms
- Growing Microorganisms
- Breakdown of waste organic matter

3.75 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.76 Tentative texts and course materials:

- Wastewater Microbiology: A Handbook for Operators, American Water Works Association, Toni Glymph.

4. Resources:

4.37 Library resources: No new library resources needed.

4.38 Computer resources: No new computer resources needed.

5. Budget implications:

5.73 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.74 Special equipment needed: None

5.75 Expendable materials needed: None

5.76 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.116 Course prefix (subject area) and number: WTTI 233
1.117 Course title: Natural Wastewater Treatment Systems
1.118 Abbreviated course title: Nat WW Treat Systems
1.119 Credit hours and contact hours: 0.5
1.120 Type of course: Lecture
1.121 Prerequisites/corequisites: WTTI 204: Introduction to Wastewater Treatment
1.122 Course catalog listing: Examination of the equipment, structures, and operating factors in natural wastewater treatment systems. Upon completion the student will be able to identify the different types of natural wastewater treatment systems, understand the underlying processes of these systems, and demonstrate which treatment systems function best in specific environments.

2. Rationale:

2.96 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.97 Projected enrollment in the proposed course: 20 students/yr
2.98 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 211 – Introduction to Wastewater Treatment
2.99 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 211: Introduction to Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.100 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.77 Course objectives: Upon completing this course, students will be able to:

- Identify different types of natural wastewater treatment systems

- Understand the processes used to create and maintain wastewater treatment systems
- Demonstrate which natural treatment functions best in specific environments

3.78 Content outline:

- Site and Soil Assessment Requirements
- Subsurface Wastewater Infiltration
- Slow-Rate Land Treatment Systems
- Rapid Infiltration Land Treatment System
- Overland-Flow Land Treatment Systems
- Wastewater Stabilization Ponds
- Floating Aquatic Plant Treatment Systems
- Constructed Wetland Systems

3.79 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.80 Tentative texts and course materials:

- Natural Systems for Wastewater Treatment, MOP FD-16, 3rd Ed., Water Environment Federation.

4. Resources:

4.39 Library resources: No new library resources needed.

4.40 Computer resources: No new computer resources needed.

5. Budget implications:

5.77 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.78 Special equipment needed: None

5.79 Expendable materials needed: None

5.80 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.123 Course prefix (subject area) and number: WTTI 234
1.124 Course title: Basic Infrastructure for Water Distribution & Wastewater Collection Systems
1.125 Abbreviated course title: Bas Infra Dist & Coll Sys
1.126 Credit hours and contact hours: 1
1.127 Type of course: Lecture
1.128 Prerequisites/corequisites: WTTI 205: Introduction to Drinking Water Distribution or WTTI 206: Introduction to Wastewater Collection
1.129 Course catalog listing: Examination of the basic components of drinking water distribution systems and wastewater collection systems. Upon completion of the course the student will be able to identify the purposes of different equipment and structures used in distribution and collection systems and recognize the operating factors affecting the planning, design, and construction of water distribution and wastewater collection systems.

2. Rationale:

2.101 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.102 Projected enrollment in the proposed course: 20 students/yr
2.103 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 212 – Water Distribution & Wastewater Collection.
2.104 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 212: Water Distribution & Wastewater Collection, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.105 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.81 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of water distribution and wastewater collection systems;
- Identify the equipment and structures used in drinking water distribution and wastewater collection systems; and
- Recognize the design factors involved in planning a water distribution or wastewater collection system.

3.82 Content outline:

- System Layoff
- Sizing Mains
- Material Selection
- Types of Pipe Materials
- Water Storage Requirements
- Types of Treated-Water Storage Facilities
- Location of Distribution Storage
- Water Storage Facility Equipment
- Operation and Maintenance of Water Storage Facilities
- Water Storage Facility Safety
- Pump Stations
- Types of Pumps
- Operation of Centrifugal Pumps
- Centrifugal Pump Maintenance
- Record Keeping
- Pump Safety
- Uses of Water Utility Valves
- Classification of Water Utility Valves
- Valve Operation
- Valve Storage
- Valve Joints
- Valve Boxes and Vaults
- Valve Records
- Wastewater and Stormwater Pumps
- Wastewater and Stormwater Pipes
- Wastewater and Stormwater Valves
- Wastewater and Stormwater Controls
- Stormwater Pumping Stations

3.83 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.84 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Transmission and Distribution, Fourth Edition, American Water Works Association.
- Design of Wastewater and Stormwater Pumping Stations – MOP FD-4, Water Environment Federation

4. Resources:

4.41 Library resources: No new library resources needed.

4.42 Computer resources: No new computer resources needed.

5. Budget implications:

5.81 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.82 Special equipment needed: None

5.83 Expendable materials needed: None

5.84 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.130 Course prefix (subject area) and number: WTTI 235
1.131 Course title: Water Distribution System Components
1.132 Abbreviated course title: Water Distri Sys Components
1.133 Credit hours and contact hours: 0.75
1.134 Type of course: Lecture
1.135 Prerequisites/corequisites: WTTI 205: Introduction to Drinking Water Distribution
1.136 Course catalog listing: Evaluation of the components used in drinking water distribution systems. Topics include hydrants, meters, cross-connections, backflow control methods and devices, and records and reporting. Upon completion students will be able to identify the purpose of distribution system components and recognize the factors involved in planning, operating, or maintaining these devices.

2. Rationale:

2.106 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.107 Projected enrollment in the proposed course: 20 students/yr
2.108 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 212 – Water Distribution & Wastewater Collection.
2.109 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 212: Water Distribution & Wastewater Collection, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.110 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.85 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of hydrants, meters, and cross-connections;
- Identify the components of hydrants, meters, and cross-connections; and
- Recognize the design factors involved in planning for installation or maintenance of hydrants, meters, or cross-connections.

3.86 Content outline:

- Fire Hydrant Uses
- Systems Problems Caused by Hydrant Operation
- Types of Fire Hydrants
- Hydrant Parts
- Inspection and Installation
- Operation and Maintenance
- Hydrant Records
- Hydrant Safety
- Customer Water Meters
- Customer Meter Installation
- Meter Reading
- Meter Testing, Maintenance, and Repair
- Mainline Metering
- Metering Safety
- Cross-Connections and Locations
- Types of Cross-Connections
- Public Health Significance of Cross-Connections
- Backflow Control Methods and Devices
- Cross-Connection Control Programs
- Records and Reports for Cross-Connections

3.87 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.88 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Transmission and Distribution, Fourth Edition, American Water Works Association.

4. Resources:

4.43 Library resources: No new library resources needed.

4.44 Computer resources: No new computer resources needed.

5. Budget implications:

5.85 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.86 Special equipment needed: None

5.87 Expendable materials needed: None

5.88 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences:	____2-18-11_____
Ogden College Curriculum Committee	_____3-3-11_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.137 Course prefix (subject area) and number: WTTI 236
1.138 Course title: Water Distribution System Operation and Maintenance
1.139 Abbreviated course title: Water Distri Sys Oper & Main
1.140 Credit hours and contact hours: 1.25
1.141 Type of course: Lecture
1.142 Prerequisites/corequisites: WTTI 205: Introduction to Drinking Water Distribution
1.143 Course catalog listing: Examination of the procedures used in the operation and maintenance of water distribution networks. Topics include pipe shipment and handling, excavation, laying pipe, pressure and leak testing, flushing and disinfection, inspections, site restoration, water main installation, maintaining water quality, maintaining flow and pressure, meter locations, service lines, and thawing. Upon completion the student will be able to identify the different types of operation and maintenance, indentify the consequences of not properly executing operation and maintenance duties, and recognize the factors which lead to system degradation.

2. Rationale:

2.111 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.112 Projected enrollment in the proposed course: 20 students/yr
2.113 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 212 – Water Distribution & Wastewater Collection.
2.114 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 212: Water Distribution & Wastewater Collection, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.115 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.89 Course objectives: Upon completing this course, students will be able to:

- Identify the different types of operation and maintenance;
- Identify the consequences of not properly performing operation and maintenance; and
- Recognize the factors which contribute to system degradation.

3.90 Content outline:

- Pipe Shipment
- Pipe Handling
- Excavation
- Laying Pipe
- Backfilling
- Pressure and Leak Testing
- Flushing and Disinfection
- Final Inspection
- Site Restoration
- Water Main Installation Safety
- Maintaining Water Quality
- Maintaining Flow and Pressure
- Meter Locations
- Service Line Sizes, Materials, and Equipment
- Water Service Taps
- Leaks and Breaks
- Thawing
- Service Line Responsibility
- Service Line Records

3.91 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.92 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Transmission and Distribution, Fourth Edition, American Water Works Association.

4. Resources:

4.45 Library resources: No new library resources needed.

4.46 Computer resources: No new computer resources needed.

5. Budget implications:

5.89 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.90 Special equipment needed: None

5.91 Expendable materials needed: None

5.92 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.144 Course prefix (subject area) and number: WTTI 237
1.145 Course title: Wastewater Collection System Assessment and Repair
1.146 Abbreviated course title: WW Collect Sys Assess & Rep
1.147 Credit hours and contact hours: 0.5
1.148 Type of course: Lecture
1.149 Prerequisites/corequisites: WTTI 206: Introduction to Wastewater Collection
1.150 Course catalog listing: Examination of the procedures used in the operation and maintenance of wastewater collection systems. Topics include collection system operation and maintenance, inspecting and testing collection system components, pipeline and manhole cleaning and inspection methods, and underground repair. Upon completion the student will be able to identify the methods and processes of maintaining collection systems and recognize when maintenance must be performed on a wastewater collection system.

2. Rationale:

2.116 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.117 Projected enrollment in the proposed course: 20 students/yr
2.118 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 212 – Water Distribution & Wastewater Collection.
2.119 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 212: Water Distribution & Wastewater Collection, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.120 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.93 Course objectives: Upon completing this course, students will be able to:

- Identify the methods of maintaining collection systems;
- Identify the processes used in maintaining collection systems; and
- Recognize when maintenance must be performed on a wastewater collection system.

3.94 Content outline:

- Collection System Operation and Maintenance
- Inspecting and Testing Collection Systems
- Pipeline Cleaning and Inspection Methods
- Underground Repair

3.95 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.96 Tentative texts and course materials:

- Operation and Maintenance of Wastewater Collection Systems, Vol. I, 6th Ed., California State University, Sacramento.

4. Resources:

4.47 Library resources: No new library resources needed.

4.48 Computer resources: No new computer resources needed.

5. Budget implications:

5.93 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.94 Special equipment needed: None

5.95 Expendable materials needed: None

5.96 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.151 Course prefix (subject area) and number: WTTI 238
1.152 Course title: Wastewater Collection Systems Management
1.153 Abbreviated course title: WW Collect System Manage
1.154 Credit hours and contact hours: 0.5
1.155 Type of course: Lecture
1.156 Prerequisites/corequisites: WTTI 206: Introduction to Wastewater Collection
1.157 Course catalog listing: Evaluation of the management concepts and considerations in the wastewater industry. Topics include operation and maintenance, information management, collection system assessment, capital improvement planning, system design considerations, construction contracting, public policy and community relations, budgeting and financial planning, safety, standard procedures, training, certifications, emergency preparedness, and security. Upon completion the student will be able to implement the main wastewater managerial techniques, characterize the administrative duties of wastewater managers, and recognize the planning considerations of wastewater operations.

2. Rationale:

2.121 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.122 Projected enrollment in the proposed course: 20 students/yr
2.123 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 212 – Water Distribution & Wastewater Collection.
2.124 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 212: Water Distribution & Wastewater Collection, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.125 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.97 Course objectives: Upon completing this course, students will be able to:

- Identify the main wastewater managerial techniques;
- Identify the administrative duties that are required for wastewater managers; and
- Recognize the factors involved in planning a wastewater operations.

3.98 Content outline:

- System Operations and Maintenance
- Information Management
- Collection System Assessment and Capital Improvement Planning
- System Design Considerations
- Construction Contracting
- Public Policy and Community Relations
- Budgeting and Financial Planning
- Safety, Standard Procedures, Training, and Certifications
- Emergency Preparedness and Security

3.99 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.100 Tentative texts and course materials:

- Operation and Maintenance of Wastewater Collection Systems: Vol. II, 6th Ed., California State University, Sacramento.
- Wastewater Collection Systems Management, MOP 7, 6th Edition, Water Environment Federation.

4. Resources:

4.49 Library resources: No new library resources needed.

4.50 Computer resources: No new computer resources needed.

5. Budget implications:

5.97 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.98 Special equipment needed: None

5.99 Expendable materials needed: None

5.100 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.158 Course prefix (subject area) and number: WTTI 239
1.159 Course title: Stormwater Management for Operators
1.160 Abbreviated course title: Stormwater Manage for Oper
1.161 Credit hours and contact hours: 0.5
1.162 Type of course: Lecture
1.163 Prerequisites/corequisites: WTTI 206: Stormwater Management for Operators
1.164 Course catalog listing: Synopsis of the control and mitigation of stormwater runoff via wastewater treatment facilities. Topics include estimating stormwater runoff, storm sewer systems, best management practices, floodplains, control of combined sewer overflows, controlling constituent discharges, and computer applications. Upon completion the student will be able to identify the purposes of stormwater management, identify the structures and equipment used in stormwater management, and recognize the design factors of planning for stormwater runoff.

2. Rationale:

2.126 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.127 Projected enrollment in the proposed course: 20 students/yr
2.128 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 212 – Water Distribution & Wastewater Collection.
2.129 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 212: Water Distribution & Wastewater Collection, approved for implementation in Spring 2009. The relationship between these courses is detailed in the attached matrix.
2.130 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.101 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of stormwater management;
- Identify the equipment and structures used in stormwater management; and
- Recognize the design factors involved in planning for stormwater runoff.

3.102 Content outline:

- Estimating Storm Runoff
- Storm Sewer Systems
- Best Management Practices
- Floodplains
- Control of Combined Sewer Overflow
- Controlling Constituent Discharges
- Computer Applications

3.103 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.104 Tentative texts and course materials:

- Basic Environmental Technology: Water Supply, Waste Management, & Pollution Control, Fifth Edition, Jerry A. Nathanson.
- Urban Runoff Quality Management-MOP 23, Water Environment Federation.

4. Resources:

4.51 Library resources: No new library resources needed.

4.52 Computer resources: No new computer resources needed.

5. Budget implications:

5.101 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.102 Special equipment needed: None

5.103 Expendable materials needed: None

5.104 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/28/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.165 Course prefix (subject area) and number: WTTI 240
1.166 Course title: Motors, Engines, and Controls in Water Operations
1.167 Abbreviated course title: Mot, Engn, & Cntrls in Water
1.168 Credit hours and contact hours: 0.5
1.169 Type of course: Lecture
1.170 Prerequisites/corequisites: None
1.171 Course catalog listing: Investigation of the various types of motor, engines, and controls used in water and wastewater treatment operations. Topics include electric motors, combustion engines, electrically driven pumps, motor and engine records, and motor and engine safety. Upon completion students will be able to recognize the purposes of engines and motors in water and wastewater treatment operations, repair and maintain engines and associated equipment, and identify the differences between electrical motors and internal combustion engines.

2. Rationale:

2.131 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.132 Projected enrollment in the proposed course: 20 students/yr
2.133 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 222 – Water and Wastewater Instrumentation and Control
2.134 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 222: Water & Wastewater Instrumentation & Control, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.135 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.105 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of engines in water treatment;
- Identify ways to repair and maintain engines and associated equipment; and
- Identify the main differences between electrical and internal combustion engines.

3.106 Content outline:

- Principles of Electric Motor Operation
- Single-Phase and Three-Phase Motors
- Electric Motor Construction
- Motor Control Equipment
- Improving the Efficiency of Electrically Driven Pumps
- Maintenance of Electric Motors
- Types of Combustion Engines
- Operation and Maintenance of Internal-Combustion Engines
- Motor and Engine Records
- Motor and Engine Safety

3.107 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.108 Tentative texts and course materials:

- M2 Instrumentation and Control, 3rd Edition, American Water Works Association
- Principles and Practices of Water Supply Operations: Water Transmission and Distribution, Fourth Edition, American Water Works Association.

4. Resources:

4.53 Library resources: No new library resources needed.

4.54 Computer resources: No new computer resources needed.

5. Budget implications:

5.105 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.106 Special equipment needed: None

5.107 Expendable materials needed: None

5.108 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences:	____2-18-11_____
Ogden College Curriculum Committee	_____3-3-11_____
Undergraduate Curriculum Committee	_____
University Senate	_____

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

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.172 Course prefix (subject area) and number: WTTI 241
1.173 Course title: Introduction to Instrumentation & Control Systems in Water Operations
1.174 Abbreviated course title: Intro Instrument & Cntrl in Wa
1.175 Credit hours and contact hours: 0.75
1.176 Type of course: Lecture
1.177 Prerequisites/corequisites: None
1.178 Course catalog listing: Introduction to the instrumentation and control systems used in water and wastewater operations. Topics include instrumentation, telemetry, control systems, SCADA system components, operation and maintenance, flow, pressure, and level measurement, and automation. Upon completion students will be able to identify the different components of an instrumentation and control system, and recognize the operational factors affecting the planning, selection, and instrumentation of an instrumentation system for water and wastewater operations.

2. Rationale:

2.136 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.137 Projected enrollment in the proposed course: 20 students/yr
2.138 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 222 – Water & Wastewater Instrumentation & Control
2.139 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 222: Water & Wastewater Instrumentation & Control, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.140 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.109 Course objectives: Upon completing this course, students will be able to:

- Identify the different types of instrumentation
- Identify the equipment and structures used in instrumentation and control; and
- Recognize the design factors involved in creating and maintaining a instrumentation system for water and wastewater operations.

3.110 Content outline:

- Primary Instrumentation
- Secondary Instrumentation and Telemetering
- Control Systems
- Supervisory Control and Data Acquisition
- SCADA System Components
- Operation and Maintenance
- Flow, Pressure, and Level Measurement
- Automation

3.111 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.112 Tentative texts and course materials:

- Operation of Municipal Wastewater Treatment Plants, MOP 11, Sixth Edition, Water Environment Federation.
- M2 Instrumentation and Control, Third Edition, American Water Works Association.
- Principles and Practices of Water Supply Operations: Water Transmission and Distribution, Fourth Edition, American Water Works Association.
- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.55 Library resources: No new library resources needed.

4.56 Computer resources: No new computer resources needed.

5. Budget implications:

5.109 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.110 Special equipment needed: None

5.111 Expendable materials needed: None

5.112 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences:	____2-18-11_____
Ogden College Curriculum Committee	_____3-3-11_____
Undergraduate Curriculum Committee	_____
University Senate	_____

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

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.179 Course prefix (subject area) and number: WTTI 242
1.180 Course title: Basic Electricity for Water Operations
1.181 Abbreviated course title: Basic Electricity for Water
1.182 Credit hours and contact hours: 0.5
1.183 Type of course: Lecture
1.184 Prerequisites/corequisites: None
1.185 Course catalog listing: Investigation of the basic concepts and applications of electricity in water and wastewater operations. Upon completion students will be able to identify the basic properties of electricity and recognize the terms and concepts associated with electricity as it pertains to water and wastewater equipment.

2. Rationale:

2.141 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.142 Projected enrollment in the proposed course: 20 students/yr
2.143 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 222 – Water & Wastewater Instrumentation & Control.
2.144 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 222: Water & Wastewater Instrumentation & Control, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.145 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.113 Course objectives: Upon completing this course, students will be able to:

- Identify the basic properties of electricity; and
- Recognize the terms and concepts associated with electricity.

3.114 Content outline:

- Electricity, Magnetism, and Electrical Measurements
- Electrical Quantities and Terms
- Functions and Ratings of Electrical Equipment

3.115 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.116 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Basic Science Concepts and Applications, Fourth Edition, American Water Works Association.

4. Resources:

4.57 Library resources: No new library resources needed.

4.58 Computer resources: No new computer resources needed.

5. Budget implications:

5.113 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.114 Special equipment needed: None

5.115 Expendable materials needed: None

5.116 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.186 Course prefix (subject area) and number: WTTI 243
1.187 Course title: Flowmeters, Sensors and Process Measurements
1.188 Abbreviated course title: Flowmet, Sen & Proc Measure
1.189 Credit hours and contact hours: 0.5
1.190 Type of course: Lecture
1.191 Prerequisites/corequisites: None
1.192 Course catalog listing: Investigation of the equipment used to measure flow and other process information in water and wastewater operations. Upon completion the student will be able to identify the purpose of measuring various data, select the equipment necessary to measure various data, and recognize the operating factors affecting the selection, positioning, and deployment of process measurement equipment.

2. Rationale:

2.146 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.147 Projected enrollment in the proposed course: 20 students/yr
2.148 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 222 – Water & Wastewater Instrumentation & Control.
2.149 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 222: Water & Wastewater Instrumentation & Control, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.150 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.117 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of measuring various data;

- Identify the equipment and structures used in measuring various data; and
- Recognize the design factors involved in measuring data effectively in a water or wastewater treatment facility.

3.118 Content outline:

- Meter Categories
- Meter Coefficient of Discharge
- Venturi Flowmeters
- Modified Venturis
- Orifice Plate Flowmeters
- Magnetic Flowmeters
- Turbine and Propeller Flowmeters
- Sonic Flowmeters
- Averaging Pitot Flowmeters
- Variable Area Flowmeters
- Open Channel Flow
- General Installation Precautions
- Signal Output and Transport
- Measuring Pressure, Level, and Temperature
- Measuring Electric Power and Equipment Status
- Process Analyzers

3.119 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.120 Tentative texts and course materials:

- M2 Instrumentation and Control, Third Edition, American Water Works Association.

4. Resources:

4.59 Library resources: No new library resources needed.

4.60 Computer resources: No new computer resources needed.

5. Budget implications:

5.117 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.118 Special equipment needed: None

5.119 Expendable materials needed: None

5.120 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.193 Course prefix (subject area) and number: WTTI 244
1.194 Course title: Automatic Process Control for Water Operations
1.195 Abbreviated course title: Auto Proc Control for Water
1.196 Credit hours and contact hours: 0.75
1.197 Type of course: Lecture
1.198 Prerequisites/corequisites: WTTI 243: Flowmeters, Sensors, and Process Measurements
1.199 Course catalog listing: Analysis of the equipment and procedures used in the automated control processes in water or wastewater facilities. Upon completion the student will recognize the various applications of automatic process control, be able to select, operate, and maintain process control equipment used in automatic technologies and characterize the operating factors involved in designing and implementing automatically controlled water and wastewater processes.

2. Rationale:

2.151 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.152 Projected enrollment in the proposed course: 20 students/yr
2.153 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 222 – Water & Wastewater Instrumentation & Control.
2.154 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 222: Water & Wastewater Instrumentation & Control, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.155 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.121 Course objectives: Upon completing this course, students will be able to:

- Identify the applications of various automatic technologies;
- Identify the equipment and structures used in automated processes; and
- Recognize the design factors involved in creating and implementing automatic controls in a water or wastewater facility.

3.122 Content outline:

- Valves
- Pumping Systems
- Miscellaneous Final Control Elements
- Feedforward Control
- Feedback Control
- Feedforward vs. Feedback Control
- Manual vs. Automatic Control
- Automatic Feedforward Control Methods
- Automatic Feedback Control Methods
- Digital Control Systems
- Communication Systems
- Applications and Site Planning
- Technology Trends

3.123 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.124 Tentative texts and course materials:

- M2 Instrumentation and Control, Third Edition, American Water Works Association.
- Automation of Wastewater Treatment Facilities, MOP 21, 3rd Edition, Water Environment Federation

4. Resources:

4.61 Library resources: No new library resources needed.

4.62 Computer resources: No new computer resources needed.

5. Budget implications:

5.121 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.122 Special equipment needed: None

5.123 Expendable materials needed: None

5.124 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.200 Course prefix (subject area) and number: WTTI 249
1.201 Course title: Basic Water Chemistry for Operators
1.202 Abbreviated course title: Basic Water Chem for Oper
1.203 Credit hours and contact hours: 1
1.204 Type of course: Lecture
1.205 Prerequisites/corequisites: None
1.206 Course catalog listing: Assessment of the essential chemical properties of water and how they can affect water quality. Upon completion the student will be able to identify the main considerations of water chemistry as they apply to water and wastewater operations.

2. Rationale:

2.156 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.157 Projected enrollment in the proposed course: 20 students/yr
2.158 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 226 – Water Chemistry.
2.159 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 226: Water Chemistry, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.160 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.125 Course objectives: Upon completing this course, students will be able to:

- Identify the main considerations of water chemistry;
- Identify the equipment used to diagnose water's chemical properties; and
- Recognize the ways in which chemical problems can be addressed.

3.126 Content outline:

- Acidity
- Alkalinity
- Calcium Carbonate Stability
- Coagulent Effectiveness
- Color
- Conductivity
- Hardness
- Taste and Odor
- Temperature
- Total Dissolved Solids
- Turbidity
- The Structure of Matter
- The Classification of Matter
- Valence, Chemical Formulas, and Chemical Equations
- Solutions
- Chemistry of Treatment Processes
- Chemical Dosage

3.127 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.128 Tentative texts and course materials:

- Basic Chemistry for Water & Wastewater Operators, American Water Works Association, Darshan Singh Sarai.
- Principles and Practices of Water Supply Operations: Water Quality, Fourth Edition, American Water Works Association.
- Principles and Practices of Water Supply Operations: Basic Science Concepts and Applications, Fourth Edition, American Water Works Association.

4. Resources:

4.63 Library resources: No new library resources needed.

4.64 Computer resources: No new computer resources needed.

5. Budget implications:

5.125 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.126 Special equipment needed: None

5.127 Expendable materials needed: None

5.128 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.207 Course prefix (subject area) and number: WTTI 250
1.208 Course title: Drinking Water Sampling and Analysis
1.209 Abbreviated course title: Drink Water Samp & Anal
1.210 Credit hours and contact hours: 1
1.211 Type of course: Lecture
1.212 Prerequisites/corequisites: WTTI 249: Basic Water Chemistry for Operators
1.213 Course catalog listing: Study of the techniques of sampling and laboratory testing of water resources. Topics include sampling, monitoring for chemical contaminants, laboratory certification, record keeping, sample labeling, sample transportation, sample storage, sample preservation, labware, major laboratory equipment, safety equipment, support equipment, analytical laboratory instruments, and laboratory procedures.

2. Rationale:

2.161 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.162 Projected enrollment in the proposed course: 20 students/yr
2.163 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 226 – Water Chemistry
2.164 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 226: Water Chemistry, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.165 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.129 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes sampling and monitoring water resources;

- Identify the equipment and structures used in sampling and monitoring water resources; and
- Recognize the safety risks associated with sampling and testing water resources.

3.130 Content outline:

- Sampling
- Monitoring for Chemical Contaminants
- Laboratory Certification
- Record Keeping and Sample Labeling
- Sample Preservation, Storage, and Transportation
- Labware
- Major Laboratory Equipment
- Safety Equipment
- Support Equipment
- Analytical Laboratory Instruments
- Laboratory Procedures

3.131 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.132 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Quality, Fourth Edition, American Water Works Association.
- Water Treatment Plant Operation, Volume I, Sixth Edition, California State University, Sacramento.
- Water Treatment Plant Operation, Volume II, Sixth Edition, California State University, Sacramento.

4. Resources:

4.65 Library resources: No new library resources needed.

4.66 Computer resources: No new computer resources needed.

5. Budget implications:

5.129 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.130 Special equipment needed: None

5.131 Expendable materials needed: None

5.132 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.214 Course prefix (subject area) and number: WTTI 251
1.215 Course title: Wastewater Sampling and Analysis
1.216 Abbreviated course title: WW Sampling & Anal
1.217 Credit hours and contact hours: 1
1.218 Type of course: Lecture
1.219 Prerequisites/corequisites: WTTI 249: Basic Water Chemistry for Operators
1.220 Course catalog listing: Investigation of the procedures for effectively sampling and analyzing wastewater. Topics include working safely in a laboratory, operating laboratory equipment, collecting representative samples, preparing samples for analysis, plant control tests, analyzing in accordance with NPDES permit requirements, shortcomings of wastewater testing, and recording laboratory results.

2. Rationale:

2.166 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.167 Projected enrollment in the proposed course: 20 students/yr
2.168 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 226 – Water Chemistry.
2.169 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 226: Water Chemistry, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.170 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.133 Course objectives: Upon completing this course, students will be able to:

- Identify the procedures necessary for effective sampling and analyzing wastewater; and
- Identify the equipment and structures used in sampling and analyzing wastewater.

3.134 Content outline:

- Working Safely in a Laboratory
- Operating Laboratory Equipment
- Collecting Representative Samples
- Preparing Samples for Analysis
- Plant Control Tests
- Analyzing in accordance with NPDES permit requirements
- Shortcomings of Wastewater Testing
- Recording Laboratory Results

3.135 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.136 Tentative texts and course materials:

- Operation of Municipal Wastewater Treatment Plants, MOP 11, Sixth Edition, Water Environment Federation.
- Operation of Wastewater Treatment Plants, Volume I, Seventh Edition, California State University, Sacramento.
- Operation of Wastewater Treatment Plants, Volume II, Seventh Edition, California State University, Sacramento.

4. Resources:

4.67 Library resources: No new library resources needed.

4.68 Computer resources: No new computer resources needed.

5. Budget implications:

5.133 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.134 Special equipment needed: None

5.135 Expendable materials needed: None

5.136 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.221 Course prefix (subject area) and number: WTTI 252
1.222 Course title: Water Operator Safety
1.223 Abbreviated course title: Water Oper Safety
1.224 Credit hours and contact hours: 0.75
1.225 Type of course: Lecture
1.226 Prerequisites/corequisites: None
1.227 Course catalog listing: This course outlines the basic process of ensuring a safe working environment for water and wastewater operators. Topics include inspections, procedures, and programs which ensure safety in the workplace. Upon completion the student will be able to demonstrate an awareness of the hazards of working in water and wastewater operations, develop and establish a safety/survival program, and conduct routine safety inspections of a water or wastewater system.

2. Rationale:

2.171 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.172 Projected enrollment in the proposed course: 20 students/yr
2.173 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 226 – Water Chemistry.
2.174 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 226: Water Chemistry, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.175 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.137 Course objectives: Upon completing this course, students will be able to:

- Demonstrate their awareness of the hazards of working in water and wastewater operations;
- Develop and establish a safety/survival program; and
- Conduct routine safety inspections of a water or wastewater system.

3.138 Content outline:

- Plant Safety
- Safe Procedures
- Safety/Survival Programs
- Inspecting Vehicles and Equipment
- Tailgate Safety Sessions
- Protecting the Public
- Inspecting Water and Wastewater Facilities
- Identifying Hazards

3.139 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.140 Tentative texts and course materials:

- Operation of Municipal Wastewater Treatment Plants, MOP 11, Sixth Edition, Water Environment Federation.
- Operation of Wastewater Treatment Plants, Volume II, Seventh Edition, California State University, Sacramento.
- Operation and Maintenance of Wastewater Collection Systems, Volume I, Sixth Edition, California State University, Sacramento.
- Operation and Maintenance of Wastewater Collection Systems, Volume II, Sixth Edition, California State University, Sacramento.
- Water Treatment Plant Operation, Volume II, Fifth Edition, California State University, Sacramento.
- Water Distribution System Operation and Maintenance, Fifth Edition, California State University, Sacramento.

4. Resources:

4.69 Library resources: No new library resources needed.

4.70 Computer resources: No new computer resources needed.

5. Budget implications:

5.137 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.138 Special equipment needed: None

5.139 Expendable materials needed: None

5.140 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.228 Course prefix (subject area) and number: WTTI 253
1.229 Course title: Wastewater Regulations
1.230 Abbreviated course title: WW Regulations
1.231 Credit hours and contact hours: 0.5
1.232 Type of course: Lecture
1.233 Prerequisites/corequisites: None
1.234 Course catalog listing: Analysis of all major forms of regulation that apply to the wastewater industry. Topics include the evolution of the Clean Water Act, pretreatment program requirements, permit compliance, safety regulations, and the National Pollutant Discharge Elimination System (NPDES). Upon completion the student will be able to identify the main forms of wastewater legislation, recognize why a wastewater facility must remain in compliance with all applicable rules and regulations and recognize how a wastewater facility can remain in compliance with all applicable rules and regulations.

2. Rationale:

2.176 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.177 Projected enrollment in the proposed course: 20 students/yr
2.178 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 226 – Water Chemistry
2.179 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 226: Water Chemistry, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.180 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.141 Course objectives: Upon completing this course, students will be able to:

- Identify the main forms of wastewater legislation;
- Recognize why a wastewater facility must remain in compliance with all applicable or relevant rules and regulations; and
- Recognize how a wastewater facility can remain in compliance will all applicable or relevant rules and regulations.

3.142 Content outline:

- Evolution of the Clean Water Act
- Pretreatment Program Requirements
- Permit Compliance and Wastewater Treatment Systems
- Safety Regulations and Requirements
- National Pollutant Discharge Elimination System (NPDES)

3.143 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.144 Tentative texts and course materials:

- Operation of Municipal Wastewater Treatment Plants, MOP 11, Sixth Edition, Water Environment Federation.

4. Resources:

4.71 Library resources: No new library resources needed.

4.72 Computer resources: No new computer resources needed.

5. Budget implications:

5.141 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.142 Special equipment needed: None

5.143 Expendable materials needed: None

5.144 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.235 Course prefix (subject area) and number: WTTI 254
1.236 Course title: Corrosion Control in Water Operations
1.237 Abbreviated course title: Corrosion Control in Water
1.238 Credit hours and contact hours: 0.5
1.239 Type of course: Lecture
1.240 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment
1.241 Course catalog listing: Investigation of the methods and techniques used to minimize corrosion in water treatment facilities. Topics include the purposes of corrosion control, corrosion control methods, corrosion control facilities, regulations, record keeping, and safety precautions.

2. Rationale:

2.181 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.182 Projected enrollment in the proposed course: 20 students/yr
2.183 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 230 – Advanced Water Treatment
2.184 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 230: Advanced Water Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.185 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.145 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of corrosion control;
- Identify the methods used in corrosion control; and
- Recognize the design factors involved in limiting corrosion.

3.146 Content outline:

- Purposes of Corrosion Control
- Water System Corrosion
- Corrosion Control Methods
- Corrosion Control Facilities
- Corrosion Control Regulations
- Corrosion Control Safety Precautions
- Corrosion Control Record Keeping

3.147 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.148 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.73 Library resources: No new library resources needed.

4.74 Computer resources: No new computer resources needed.

5. Budget implications:

5.145 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.146 Special equipment needed: None

5.147 Expendable materials needed: None

5.148 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.242 Course prefix (subject area) and number: WTTI 255
1.243 Course title: Ion Exchange Processes in Water Treatment
1.244 Abbreviated course title: Ion Exchange in Water Treat
1.245 Credit hours and contact hours: 0.5
1.246 Type of course: Lecture
1.247 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment
1.248 Course catalog listing: Course devoted to the process and equipment used in ion exchange treatment of water. Topics include ion exchange softening, operation of ion exchange processes, and record keeping. Upon completion the student will be able to identify the purposes of ion exchange, identify the equipment and structures used in the ion exchange treatment process, and recognize the operational factors involved in planning, design, and construction of an ion exchange softening facility.

2. Rationale:

2.186 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.187 Projected enrollment in the proposed course: 20 students/yr
2.188 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 230 – Advanced Water Treatment.
2.189 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 230: Advanced Water Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.190 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.149 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of ion exchange;
- Identify the equipment and structures used in ion exchange; and
- Recognize the design factors involved in planning a ion exchange softening facility.

3.150 Content outline:

- Ion Exchange Softening
- Operation of Ion Exchange Processes
- Ion Exchange Record Keeping

3.151 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.152 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.75 Library resources: No new library resources needed.

4.76 Computer resources: No new computer resources needed.

5. Budget implications:

5.149 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.150 Special equipment needed: None

5.151 Expendable materials needed: None

5.152 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.249 Course prefix (subject area) and number: WTTI 256
1.250 Course title: Adsorption Processes in Water Treatment
1.251 Abbreviated course title: Adsorption in Water Treat
1.252 Credit hours and contact hours: 0.5
1.253 Type of course: Lecture
1.254 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment
1.255 Course catalog listing: Analysis of the process and equipment used in the Adsorption process of water treatment. Topics include process description, the principles of adsorption, adsorption facilities, regulations, operating procedures, safety precautions, and record keeping. Upon completion the student will be able to identify the purposes of adsorption in drinking water facilities, identify the equipment and structures used in adsorption facilities, and recognize the operational factors involved in planning, design, and construction of an adsorption facility.

2. Rationale:

2.191 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.192 Projected enrollment in the proposed course: 20 students/yr
2.193 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 230 – Advanced Water Treatment.
2.194 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 230: Advanced Water Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.195 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.153 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of adsorption in drinking water treatment;
- Identify the equipment and structures used in adsorption facilities; and
- Recognize the design factors involved in planning an adsorption facility

3.154 Content outline:

- Process Description
- The Principles of Adsorption
- Adsorption Facilities
- Regulations
- Operating Procedures for Adsorption
- Safety Precautions
- Record Keeping

3.155 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.156 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.77 Library resources: No new library resources needed.

4.78 Computer resources: No new computer resources needed.

5. Budget implications:

5.153 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.154 Special equipment needed: None

5.155 Expendable materials needed: None

5.156 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.256 Course prefix (subject area) and number: WTTI 257
1.257 Course title: Aeration Processes in Water Treatment
1.258 Abbreviated course title: Aeration in Water Treat
1.259 Credit hours and contact hours: 0.5
1.260 Type of course: Lecture
1.261 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment
1.262 Course catalog listing: Investigation of the process and equipment utilized during the aeration process of water treatment. Topics include process description, types of aerators, regulations, control tests, operating problems, safety precautions, and record keeping. Upon completion the student will be able to identify the purposes of aeration in water treatment, identify the structures and equipment used in aeration processes, and recognize the operational factors involved in planning, design, and construction of aeration units.

2. Rationale:

2.196 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.197 Projected enrollment in the proposed course: 20 students/yr
2.198 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 230 – Advanced Water Treatment
2.199 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 230: Advanced Water Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.200 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.157 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of aeration in water treatment;
- Identify the equipment and structures used in aeration; and
- Recognize the design factors involved aeration units.

3.158 Content outline:

- Process Description
- Types of Aerators
- Regulations
- Control Tests
- Operating Problems
- Safety Precautions
- Record Keeping

3.159 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.160 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.79 Library resources: No new library resources needed.

4.80 Computer resources: No new computer resources needed.

5. Budget implications:

5.157 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.158 Special equipment needed: None

5.159 Expendable materials needed: None

5.160 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.263 Course prefix (subject area) and number: WTTI 258
1.264 Course title: Membrane Processes in Water Treatment
1.265 Abbreviated course title: Membrane Proc in Water Treat
1.266 Credit hours and contact hours: 0.5
1.267 Type of course: Lecture
1.268 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment
1.269 Course catalog listing: Exploration of the processes and equipment used in membrane filtration. Topics include description of membrane processes, microfiltration facilities, pleated membrane facilities, nanofiltration and reverse osmosis facilities, operating problems, and record keeping. Upon completion the student will be able to identify the purposes of membrane filtration, identify the equipment and structures used in membrane filtration, and recognize the operational factors involved in planning, design, and construction membrane filtration.

2. Rationale:

2.201 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.202 Projected enrollment in the proposed course: 20 students/yr
2.203 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 230 – Advanced Water Treatment
2.204 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 230: Advanced Water Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.205 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.161 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of membrane filtration;
- Identify the equipment and structures used in membrane filtration; and
- Recognize the design factors involved in membrane filtration.

3.162 Content outline:

- Description of Membrane Processes
- Microfiltration Facilities
- Pleated Membrane Facilities
- Nanofiltration and Reverse Osmosis Facilities
- Operation of the Reverse Osmosis Process
- Operating Problems
- Record Keeping

3.163 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.164 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.

4. Resources:

4.81 Library resources: No new library resources needed.

4.82 Computer resources: No new computer resources needed.

5. Budget implications:

5.161 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.162 Special equipment needed: None

5.163 Expendable materials needed: None

5.164 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 1/31/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.270 Course prefix (subject area) and number: WTTI 259
1.271 Course title: Introduction to Residuals Management in Water Operations
1.272 Abbreviated course title: Intro to Residual Mgmt
1.273 Credit hours and contact hours: 0.5
1.274 Type of course: Lecture
1.275 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment or WTTI 204: Introduction to Wastewater Treatment
1.276 Course catalog listing: Introduction to the equipment, structures, and processes associated with residuals management in water and wastewater systems. Topics include process description, facilities, and operations, sludge calculations, removal of sludge by traditional sedimentation processes, softening sludge, and solids separation technology. Upon completion the student will be able to identify the purposes of residuals management, indentify the equipment and structures involved in residuals management, and recognize the operational factors involved in planning, design, and construction of a residuals management facility.

2. Rationale:

2.206 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.207 Projected enrollment in the proposed course: 20 students/yr
2.208 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 230 – Advanced Water Treatment and WTTI 231 – Advanced Wastewater Treatment.
2.209 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 230: Advanced Water Treatment and WTTI 231: Advanced Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.210 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway

College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.165 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of residuals management;
- Identify the equipment and structures used residuals management; and
- Recognize the design factors involved in planning a residuals management system.

3.166 Content outline:

- Process Description
- Residual Facilities and Operations
- Sludge Calculations
- Removal of Sludge by Traditional Sedimentation Processes
- Softening Sludge
- Solids Separation Technologies

3.167 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.168 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Treatment, Fourth Edition, American Water Works Association.
- Advanced Waste Treatment, Fifth Edition, California State University, Sacramento.
- Industrial Waste Treatment, Volume II, California State University, Sacramento.

4. Resources:

4.83 Library resources: No new library resources needed.

4.84 Computer resources: No new computer resources needed.

5. Budget implications:

5.165 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.166 Special equipment needed: None

5.167 Expendable materials needed: None

5.168 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 2/1/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.277 Course prefix (subject area) and number: WTTI 260
1.278 Course title: Suspended Growth Systems in Wastewater Operations
1.279 Abbreviated course title: Suspend Growth Systems in WW
1.280 Credit hours and contact hours: 0.5
1.281 Type of course: Lecture
1.282 Prerequisites/corequisites: WTTI 204: Introduction to Wastewater Treatment
1.283 Course catalog listing: Investigation of the design and processes of suspended growth systems in wastewater treatment facilities. Topics include the activated sludge process, operation of activated sludge plants, strategies for controlling biomass inventory, energy use and energy saving opportunities, solving common operational problems, aerobic digestion, and sludge digestion and solids handling. Upon completion the student will be able to identify the purposes of suspended growth systems, identify the equipment and structures used in suspended growth systems, and recognize the operational factors involved in planning, design, and construction of a suspended growth system.

2. Rationale:

2.211 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.212 Projected enrollment in the proposed course: 20 students/yr
2.213 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 231 – Advanced Wastewater Treatment.
2.214 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 231: Advanced Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.215 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.169 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of suspended growth systems;
- Identify the equipment and structures used in suspended growth systems; and
- Recognize the design factors involved in planning a suspended growth system.

3.170 Content outline:

- Activated Sludge Process
- Strategies for Controlling Biomass Inventory
- Energy Use and Energy Saving Opportunities
- Solving Common Operational Problems
- Aerobic Digestion
- Operation of Conventional Activated Sludge Plants
- Sludge Digestion and Solids Handling

3.171 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.172 Tentative texts and course materials:

- Operation of Wastewater Treatment Plants, Volume II, Seventh Edition, California State University, Sacramento.
- Operation of Municipal Wastewater Treatment Plants, MOP 11, Sixth Edition, Water Environment Federation.
- Activated Sludge – MOP OM-9, Second Edition, Water Environment Federation.

4. Resources:

4.85 Library resources: No new library resources needed.

4.86 Computer resources: No new computer resources needed.

5. Budget implications:

5.169 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.170 Special equipment needed: None

5.171 Expendable materials needed: None

5.172 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: 2/1/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.284 Course prefix (subject area) and number: WTTI 261
1.285 Course title: Attached Growth Systems in Wastewater Operations
1.286 Abbreviated course title: Attach Growth System in WW
1.287 Credit hours and contact hours: 0.5
1.288 Type of course: Lecture
1.289 Prerequisites/corequisites: WTTI 204: Introduction to Wastewater Treatment
1.290 Course catalog listing: Investigation of the facilities and processes used in attached growth systems. Topics include trickling filters, biological filters, rotating biological contractors, operation of attached growth systems, and maintenance of attached growth systems. Upon completion the student will be able to identify the purposes of attached growth systems, identify the equipment and structures used in attached growth systems, and recognize the operational factors involved in planning, design, and construction of an attached growth system.

2. Rationale:

2.216 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.217 Projected enrollment in the proposed course: 20 students/yr
2.218 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 231 – Advanced Wastewater Treatment.
2.219 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 231: Advanced Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.220 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.173 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of attached growth systems;
- Identify the equipment and structures used in attached growth systems; and
- Recognize the design factors involved in planning an attached growth system.

3.174 Content outline:

- Trickling Filters
- Biological Filters
- Rotating Biological Contactors
- Operation of attached growth systems
- Maintenance of attached growth systems

3.175 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.176 Tentative texts and course materials:

- Industrial Waste Treatment, Volume II, California State University, Sacramento.
- Operation of Municipal Wastewater Treatment Plants, MOP 11, Sixth Edition, Water Environment Federation.

4. Resources:

4.87 Library resources: No new library resources needed.

4.88 Computer resources: No new computer resources needed.

5. Budget implications:

5.173 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.174 Special equipment needed: None

5.175 Expendable materials needed: None

5.176 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 2/1/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.291 Course prefix (subject area) and number: WTTI 262
1.292 Course title: Nutrient Removal Processes in Water Operations
1.293 Abbreviated course title: Nutrient Removal in Water
1.294 Credit hours and contact hours: 1
1.295 Type of course: Lecture
1.296 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment or WTTI 204: Introduction to Wastewater Treatment
1.297 Course catalog listing: Course examining the equipment, structures, and design factors used in nutrient removal. Topics include Phosphorus removal, Nitrogen removal, enhanced biological control, solids removal from secondary effluents, nutrients and their effects on the environment, regulations, structured process models for nutrient removal, troubleshooting for full-scale nutrient removal facilities, and aquatic natural treatment systems. Upon completion the student will be able to identify the purposes of nutrient removal, identify the equipment and structures used in nutrient removal, and recognize the operational factors involved in planning, design, and construction of a nutrient removal system.

2. Rationale:

2.221 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.222 Projected enrollment in the proposed course: 20 students/yr
2.223 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 231 – Advanced Wastewater Treatment.
2.224 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 231: Advanced Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.225 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.177 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of nutrient removal;
- Identify the equipment and structures used in nutrient removal; and
- Recognize the design factors involved in planning a nutrient removal system.

3.178 Content outline:

- Phosphorus Removal
- Nitrogen Removal
- Enhanced Biological (Nutrient) Control
- Solids Removal from Secondary Effluents
- Nutrients and Their Effects on the Environment
- Regulation of Nutrients in the Effluents of Wastewater Treatment Plants
- Structured Process Models for Nutrient Removal
- Troubleshooting for Full-Scale Nutrient Removal Facilities
- Aquatic Natural Treatment Systems

3.179 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.180 Tentative texts and course materials:

- Advanced Waste Treatment, Fifth Edition, California State University, Sacramento.
- Operation of Municipal Wastewater Treatment Plants, MOP 11, Sixth Edition, Water Environment Federation.
- Nutrient Removal, MOP 34, Water Environment Federation.

4. Resources:

4.89 Library resources: No new library resources needed.

4.90 Computer resources: No new computer resources needed.

5. Budget implications:

5.177 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.178 Special equipment needed: None

5.179 Expendable materials needed: None

5.180 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences:	____2-18-11_____
Ogden College Curriculum Committee	_____3-3-11_____
Undergraduate Curriculum Committee	_____
University Senate	_____

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

Proposal Date: 2/1/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.298 Course prefix (subject area) and number: WTTI 263
1.299 Course title: Industrial Wastewater Pretreatment Processes
1.300 Abbreviated course title: Industrial WW Pretreatment
1.301 Credit hours and contact hours: 0.5
1.302 Type of course: Lecture
1.303 Prerequisites/corequisites: WTTI 204: Introduction to Wastewater Treatment
1.304 Course catalog listing: Evaluation of the equipment, structures, and process involved in pretreatment of industrial wastewater. Topics include regulations governing industrial pretreatment, types of industrial pretreatment processes, troubleshooting, and maintaining industrial pretreatment processes. Upon completion the student will be able to identify the purposes of industrial pretreatment, identify the equipment and structures used in industrial pretreatment, and recognize the operational factors involved in planning, design, and construction of an industrial pretreatment program.

2. Rationale:

2.226 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.227 Projected enrollment in the proposed course: 20 students/yr
2.228 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. In particular, this course replaces a portion of WTTI 231 – Advanced Wastewater Treatment.
2.229 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 231: Advanced Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.230 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.181 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of industrial pretreatment;
- Identify the equipment and structures used for industrial pretreatment; and
- Recognize the design factors involved in planning an industrial pretreatment facility.

3.182 Content outline:

- Regulations Governing Industrial Pretreatment
- Types of Industrial Pretreatment Processes
- Equipment Used in Industrial Pretreatment
- Troubleshooting Industrial Pretreatment Processes
- Maintaining Industrial Pretreatment Processes

3.183 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.184 Tentative texts and course materials:

- Industrial Waste Treatment, Volume I, California State University, Sacramento.
- Operation of Municipal Wastewater Treatment Plants, MOP 11, Sixth Edition, Water Environment Federation

4. Resources:

4.91 Library resources: No new library resources needed.

4.92 Computer resources: No new computer resources needed.

5. Budget implications:

5.181 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.182 Special equipment needed: None

5.183 Expendable materials needed: None

5.184 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 2/1/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.305 Course prefix (subject area) and number: WTTI 266
1.306 Course title: Customer Service and Public Relations in Water Operations
1.307 Abbreviated course title: Cust Serv & Pub Rel in Water
1.308 Credit hours and contact hours: 0.5
1.309 Type of course: Lecture
1.310 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment or WTTI 204: Introduction to Wastewater Treatment
1.311 Course catalog listing: Analysis of the methods by which water and wastewater utilities effectively deal with customers and the public. Topics include the role of public relations, water distribution personnel, and informed employees in public relations; formal public relations programs; general principles of customer inquiries and complaint investigation; and handling specific complaints. Upon completion the student will be able to identify the purpose of quality customer service and public relations, and implement the methods by which these are performed effectively.

2. Rationale:

2.231 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.232 Projected enrollment in the proposed course: 20 students/yr
2.233 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. This course will follow this format; however, it is not tied to any existing course.
2.234 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 210: Introduction to Water Treatment and WTTI 211: Introduction to Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.235 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.185 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of quality customer service and public relations;
- Identify the methods by which these are performed effectively; and
- Recognize the design factors involved in planning efficient customer service and public relations services.

3.186 Content outline:

- The Role of Public Relations
- The Role of Water Distribution Personnel
- The Role of Informed Employees in Public Relations
- Formal Public Relations Programs
- General Principles of Customer Inquiries and Complaint Investigation
- Handling Specific Complaints

3.187 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.188 Tentative texts and course materials:

- Principles and Practices of Water Supply Operations: Water Transmission and Distribution, Fourth Edition, American Water Works Association.
- Principles and Practices of Water Supply Operations: Water Quality, Fourth Edition, American Water Works Association.

4. Resources:

4.93 Library resources: No new library resources needed.

4.94 Computer resources: No new computer resources needed.

5. Budget implications:

5.185 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.186 Special equipment needed: None

5.187 Expendable materials needed: None

5.188 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 2/1/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.312 Course prefix (subject area) and number: WTTI 264
1.313 Course title: Wastewater Residuals Management
1.314 Abbreviated course title: WW Residuals Mgmt
1.315 Credit hours and contact hours: 0.5
1.316 Type of course: Lecture
1.317 Prerequisites/corequisites: WTTI 259: Introduction to Residuals Management in Water Operations
1.318 Course catalog listing: Course examining the equipment, structures, and processes used in wastewater residuals management. Topics include process description, sludge stabilization, sludge thickening, sludge dewatering, sludge drying, sludge composting, and biosolids reduction processes. Upon completion the student will be able to identify the purposes of wastewater residuals management, identify the equipment and structures involved in wastewater residuals management, and recognize the operational factors involved in planning, design, and construction of wastewater residuals management systems.

2. Rationale:

2.236 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.237 Projected enrollment in the proposed course: 20 students/yr
2.238 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. This class will follow this format, however, it is not tied to any existing course.
2.239 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 231: Advanced Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.240 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.189 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of wastewater residuals management;
- Identify the equipment and structures used in wastewater residuals management; and
- Recognize the design factors involved in planning an effective wastewater residuals management system.

3.190 Content outline:

- Process Description
- Wastewater Residual Facilities
- Wastewater Residual Operations
- Sludge Stabilization
- Sludge Thickening
- Sludge Dewatering
- Sludge Drying
- Sludge Composting
- Biosolids Reduction Processes

3.191 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.192 Tentative texts and course materials:

- Industrial Waste Treatment, Volume II, California State University, Sacramento.
- Operation of Municipal Wastewater Treatment Plants, MOP 11, Sixth Edition, Water Environment Federation.

4. Resources:

4.95 Library resources: No new library resources needed.

4.96 Computer resources: No new computer resources needed.

5. Budget implications:

5.189 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.190 Special equipment needed: None

5.191 Expendable materials needed: None

5.192 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences: ____2-18-11_____

Ogden College Curriculum Committee _____3-3-11_____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 2/1/11

Ogden College of Science & Engineering
Department of Architectural & Manufacturing Sciences
Proposal to Create a New Course
(Action Item)

Contact Person: Jana Fattic, jana.fattic@wku.edu, 745-8706

1. Identification of proposed course:

1.319 Course prefix (subject area) and number: WTTI 265
1.320 Course title: Recordkeeping and Reporting for Water Operations
1.321 Abbreviated course title: Records & Reporting for Water
1.322 Credit hours and contact hours: 0.5
1.323 Type of course: Lecture
1.324 Prerequisites/corequisites: WTTI 203: Introduction to Drinking Water Treatment or WTTI 204: Introduction to Wastewater Treatment
1.325 Course catalog listing: Discussion of ways to effectively keep track of records and reports for a water or wastewater utility. Topics include the purpose of records, computer recordkeeping systems, types of records, equipment and maintenance records, plant operations data, procurement records, inventory records, personnel records, and disposition of plant and system records. Upon completion the student will be able to identify the purpose of records and reports and identify the systems and structures of effective recordkeeping and reporting.

2. Rationale:

2.241 Reason for developing the proposed course: The current courses in the Water Resource Management degree program are being divided into smaller modules in order to make the program more appealing and accessible to existing water treatment technicians and operators. Information from a steering committee consisting of industry professionals, trade associations, and governmental certification authorities indicates that there is a need for such accommodation for those already in the workforce.
2.242 Projected enrollment in the proposed course: 20 students/yr
2.243 Relationship of the proposed course to courses now offered by the department: Modular courses will eventually replace all of the current 3-hour courses in the program. This course will follow this format, however, it is not tied to any existing course.
2.244 Relationship of the proposed course to courses offered in other departments: This course is a modularized subset of content included in WTTI 230: Advanced Water Treatment and WTTI 231: Advanced Wastewater Treatment, approved for implementation in Fall 2009. The relationship between these courses is detailed in the attached matrix.
2.245 Relationship of the proposed course to courses offered in other institutions: Other educational institutions offer courses in water system operations (Florida Gateway College, Bristol Community College), but none in a modular fashion. This is an innovative approach.

3. Discussion of proposed course:

3.193 Course objectives: Upon completing this course, students will be able to:

- Identify the purposes of records and reports; and
- Identify the systems and structures of effective recordkeeping and reporting.

3.194 Content outline:

- Purpose of Records
- Computer Recordkeeping Systems
- Types of Records
- Equipment and Maintenance Records
- Plant Operations Data
- Procurement Records
- Inventory Records
- Personnel Records
- Disposition of Plant and System Records

3.195 Student expectations and requirements: Quizzes and exams based on textbook and lecture materials.

3.196 Tentative texts and course materials:

- Operation of Wastewater Treatment Plants, Volume II, Seventh Edition, California State University, Sacramento.
- Utility Management, Second Edition, California State University, Sacramento.
- Operation of Municipal Wastewater Treatment Plants, MOP 11, Sixth Edition, Water Environment Federation.
- Water Treatment Plant Operation, Volume II, Fifth Edition, California State University, Sacramento.

4. Resources:

4.97 Library resources: No new library resources needed.

4.98 Computer resources: No new computer resources needed.

5. Budget implications:

5.193 Proposed method of staffing: Faculty and staff in the Center for Water Resource Studies will form the core staff for all WTI courses, along with qualified faculty from appropriate departments within the university community. The primary instructional mode for this course will be web-delivered, independent learning, for which nationally prominent practitioners meeting WKU credentialing requirements will he recruited as instructors of record.

5.194 Special equipment needed: None

5.195 Expendable materials needed: None

5.196 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Department of Architectural & Mfg Sciences:	____2-18-11_____
Ogden College Curriculum Committee	_____3-3-11_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: October 25, 2010

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

Contact Person: John Khouryieh, hanna.khouryieh@wku.edu, (270)-852-6407

1. Identification of proposed course:

1.28 Course prefix (subject area) and number: AMS 395
1.29 Course title: Fundamentals of HACCP
1.30 Abbreviated course title: Fundamentals of HACCP
1.31 Credit hours and contact hours: 3
1.32 Type of course: L
1.33 Prerequisites: AMS 301
1.34 Course catalog listing:
Development and implementation of the Hazard Analysis and Critical Control Point (HACCP) system and its application in the food processing industry.

2. Rationale:

2.246 Reason for developing the proposed course:
HACCP is a prevention food safety system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement, and handling, to manufacturing, distribution, and consumption of the finished product. The HACCP system is developed to prevent food safety problems before they occur rather than trying to identify them after they are present. The HACCP program has been mandated by the USDA and FDA for the nation's meat, poultry, seafood and juice processors. This mandatory rule necessitates extensive training in HACCP for food industry managers. Our students will be trained and prepared to take responsibility in the food industry for proper food handling to eliminate hazards and prevent food borne illness through implementing effective HACCP plans.

2.247 Projected enrollment in the proposed course: This course will be required for students enrolled in the Food Automation and Manufacturing (changing to Food Processing and Technology) Program. Based on articulation agreements with KCTCS and data collected from industrial partners, we believe that the enrollment will grow to about 20 students per section. However, because this program is being offered at WKU's Owensboro campus, recruitment will be vital in order to build the enrollment.

2.248 Relationship of the proposed course to courses now offered by the department: This department offers no other such courses.

2.249 Relationship of the proposed course to courses offered in other departments: None of the WKU departments focus on HACCP plan development and implementation.

2.250 Relationship of the proposed course to courses offered in other institutions: Although there are no courses like the proposed course at our benchmark institutions or in the state of Kentucky, there are many institutions that offer at least one course for HACCP development and implementation, including: HACCP at Purdue University, Principles of HACCP at Kansas State University, Fundamentals of HACCP at Pennsylvania State University, HACCP at Virginia Tech University, Introduction to HACCP at North Carolina State University, HACCP at Texas A&M University.

3. Discussion of proposed course:

3.197 Course objectives:

Students completing the course should be able to:

- Understand the principles of HACCP and its prerequisite programs (GMPs, SOPs, SSOPs) and apply them to the food processing industry through the development of HACCP plans.
- Identify potential hazards (biological, chemical and physical) that pose food safety challenges to food products and characterize the critical control points that can be monitored to reduce or eliminate the hazards.
- Develop an HACCP plan and understand the steps and team dynamics necessary in the development and implementation of an HACCP program.

3.198 Content outline:

- Organizations, regulations and initiatives
- Prerequisite programs: GMPs, SOPs, SSOPs
- Preliminary HACCP steps
- HACCP Plan Development
- Potential hazards: Biological, physical and chemical
- Principle 1-Conducting a hazard analysis
- Principle 2-Identifying critical control points (CCPs)
- HACCP validation
- Principle 3-Establishing critical limits (CL)
- Principle 4-Monitoring CCPs
- Principle 5-Establishing corrective actions (CA)
- Principle 6-Establishing verification procedures
- Principle 7-Establishing recordkeeping procedures
- Recalls
- Setting up a traceback system
- Implementing and maintaining HACCP

3.199 Student expectations and requirements:

- Successfully develop HACCP plan
- Complete required examinations
- Complete required readings including text and outside sources
- Attend lectures and participate in discussion
- Complete all assignments including case studies
- Participate in all group and team activities

3.200 Tentative texts and course materials:

HACCP: A Systematic Approach to Food Safety. A Comprehensive Manual for Developing and Implementing a Hazard Analysis and Critical Control Point Plan. Virginia N. Scott and Kenneth E. Stevenson, Editors, Food Products Association, Fourth Edition, 2006.

4. Resources:

4.99 Library resources: See attached library resource form.

4.100 Computer resources: Existing departmental computer facilities are adequate to facilitate this course.

5. Budget implications:

5.197 Proposed method of staffing: A current member of the faculty with expertise in food science will be teaching the class.

5.198 Special equipment needed: This course will require no special equipment.

5.199 Expendable materials needed: This course will not require any more expendable material than any other lecture course taught within the AMS Department.

5.200 Laboratory materials needed: This course will not require any laboratory materials.

6. Proposed term for implementation:
Fall 2011

7. Dates of prior committee approvals:

AMS Department/Division: _____2-4-11_____

OCSE Curriculum Committee _____

Undergraduate Curriculum Committee _____

University Senate _____

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

Proposal Date: April 28, 2010

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

Contact Person: Nezam Iraniparast, nezam.irniparast@wku.edu, Phone: 56218

1. Identification of proposed course:

1.1 Course prefix (subject area) and number: MATH 370
1.2 Course title: Applied Techniques in Mathematics
1.3 Abbreviated course title: Appl Techniques in Math
1.4 Credit hours and contact hours: 3
1.5 Type of course: L
1.6 Prerequisites: MATH 237, MATH 331 with grades of C or higher
1.7 Course catalog listing:
Matrices, systems of ordinary differential equations, complex variables, and at least one of the topics from Fourier analysis, numerical analysis, or optimization (linear programming, Lagrange multipliers).

2. Rationale:

2.1 Reason for developing the proposed course:
The department proposes MATH 370 (Applied Techniques in Mathematics) to provide engineering students and mathematics majors and minors with an overview of fundamental techniques of applied mathematics. The proposed course will fill the needs of the engineering students for one such course and give math students a foundation for further study in applied areas. This dual function should insure course enrollment at an acceptable level.

2.2 Projected enrollment in the proposed course:
Approximately 30 students will take this course every year.

2.3 Relationship of the proposed course to courses now offered by the department:
This course will build upon the mathematical skills learned in MATH 237 and MATH 331.

2.4 Relationship of the proposed course to courses offered in other departments:
No other course with contents similar to this course is offered on campus.

2.5 Relationship of the proposed course to courses offered in other institutions:
No other institution in the benchmark list has a course with the exclusive topics of MATH 370. However, most departments, including ours, have these topics scattered in their inventory of courses. We have isolated these specific topics to provide the engineering students and mathematics majors and minors with an introduction to the fundamental techniques of applied mathematics.

3. Discussion of proposed course:

3.1 Course objectives:
Students who complete this course should have learned the following skills.

- The essentials of matrix algebra, determinants and computation of eigenvalues and eigenvectors.
- Method of solving systems of linear ordinary differential equations and their applications.
- Basics of complex variables, their algebra, complex-valued functions, and basic analysis of complex functions.
- Expanding real functions in Fourier sine and cosine series, or basics of numerical solution to algebraic and/or differential equations, or optimization techniques of linear/nonlinear programming

3.2 Content outline:

- Matrices
- Systems of ordinary differential equations
- Complex variables
- At least one of the topics from Fourier analysis, numerical analysis, or optimization (linear programming, Lagrange multipliers).

3.3 Student expectations and requirements:
Students are expected to attend class, turn in assignments for grade, and complete unit exams and a final exam.

3.4 Tentative texts and course materials:

- C.R. Wylie and L.C. Barrett, Advanced Engineering Mathematics, McGraw-Hill Companies; 6th Sub edition (March 1, 1995)
- Erwin Kreyszig, Advanced Engineering Mathematics, Wiley; 9th edition (May 10, 2006)
- Michael Greenberg, Advanced Engineering Mathematics, Prentice Hall, 2nd edition (January 18, 1998)
- Peter O'Neil, Advanced Engineering Mathematics, CL-Engineering; 6th edition (March 7, 2006)

4. Resources:

4.1 Library resources:
See attached library resources form.

4.2 Computer resources:
None

5. Budget implications:

5.1 Proposed method of staffing:
Existing faculty

5.2 Special equipment needed:
None

5.3 Expendable materials needed:

None

5.4 Laboratory materials needed:
None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Mathematics and Computer Science:	__April 30, 2010____
Ogden College Curriculum Committee	__February 3, 2011__
Undergraduate Curriculum Committee	_____
University Senate	_____

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

Proposal Date: 2/11/2011

Ogden College
Department of Geography and Geology
Proposal to Create a New Course
(Action Item)

Contact Person: Chris Groves, chris.groves@wku.edu, 745-5974

1. Identification of proposed course:
   - 1.4 Course prefix (subject area) and number: GEOG 459
   - 1.5 Course title: Physical Hydrology
   - 1.6 Abbreviated course title: Physical Hydrology
   - 1.7 Credit hours and contact hours: 3
   - 1.8 Type of course: L (Lecture)
   - 1.9 Prerequisites: MATH 136 with a grade of C or better, and GEOG 310 or GEOL 420.
   - 1.7 Course catalog listing: A geologically-based and calculus-based introduction to the Earth's hydrologic cycle, using principles of fluid dynamics, that addresses components of atmospheric, surface, and ground waters. Field trips and field-based exercises are required.

2. Rationale:
   - 2.251 Reason for developing the proposed course: This course introduces key fluids and hydrology concepts in a mathematical framework and provides an opportunity to strengthen the quantitative problem-solving experience of students by having applied and relevant applications of calculus. While there is an expectation of mathematical experience based on the prerequisites, all appropriate mathematical concepts will be reviewed. This course will be required in a newly proposed physical geography concentration in the geography major (#674) focused on karst geoscience, for which there is an increasing international demand. This course will provide the foundation for the additional required core and elective courses in this concentration.
   - 2.252 Projected enrollment in the proposed course: 10-15 students per offering.
   - 2.253 Relationship of the proposed course to courses now offered by the department: An introductory, non-calculus-based hydrology course (GEOG 310) is currently offered. The proposed course will complement content covered in physical geography and the summer Karst Field Studies program.
   - 2.254 Relationship of the proposed course to courses offered in other departments: Hydrology courses are offered in Engineering but they are not primarily geologically based.
   - 2.255 Relationship of the proposed course to courses offered in other institutions: Introductory, calculus-based hydrology courses are offered at a number of universities in the US and internationally, including the University of Kentucky.

3. Discussion of proposed course:
   - 3.201 Course objectives:

• Students will develop an understanding of the hydrologic cycle; elements/properties of cycles such as reservoirs, fluxes, and residence times; and the principles of fluid dynamics. Students will build on this knowledge to develop quantitative, predictive capabilities in understanding dynamics of water in the atmosphere, surface, and underground.

3.202 Content outline:

- The science of hydrology
- Mathematical backgrounds
- Land-atmosphere interactions
- Principles of fluid dynamics
- Open channel hydraulics
- Catchment hydrology
- Groundwater hydraulics
- Groundwater hydrology
- Water in the unsaturated zone.

3.203 Student expectations and requirements: Written quizzes and exams, field project write-ups, homework exercises, and article discussions.

3.204 Tentative texts and course materials: *Principles of Physical Hydrology* by Hornberger *et al.* (1998) and selected readings, including book chapters and journal articles.

4. Resources:
   4.101 Library resources: See Library Form
   4.102 Computer resources: Internet access

5. Budget implications:
   5.201 Proposed method of staffing: Current staff
   5.202 Special equipment needed: None
   5.203 Expendable materials needed: None
   5.204 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Geography and Geology Department:	_____2/23/2011_____
OCSE Curriculum Committee	_____3/3/2011_____
Undergraduate Curriculum Committee	_____3/24/2011_____
University Senate	_____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: 2/11/2011

Ogden College
Department of Geography and Geology
Proposal to Create a New Course
(Action Item)

Contact Person: Jason Polk, jason.polk@wku.edu, 745-5015

1. Identification of proposed course:
   - 1.10 Course prefix (subject area) and number: GEOG 461
   - 1.11 Course title: Karst Environments
   - 1.12 Abbreviated course title: Karst Environments
   - 1.13 Credit hours and contact hours: 3
   - 1.14 Type of course: L (Lecture)
   - 1.15 Prerequisites: GEOG 310 or 459, GEOG 420, or permission of instructor.
   - 1.16 Course catalog listing: Provides a fundamental understanding of karst, focusing on the processes, landforms, and evolution of karst landscapes over time, with an emphasis on the characterization, distribution, and function of various karst environments. Field trips and field-based exercises are required.

2. Rationale:
   - 2.256 Reason for developing the proposed course: This course will be a required core course for a newly proposed physical geography concentration in the #674 geography major focused on karst geoscience, for which there is an increasing international demand. This course provides the foundation for the additional required core and elective courses in this concentration. It will have an international scope and provide opportunity for student engagement in research and fieldwork.
   - 2.257 Projected enrollment in the proposed course: 20 students per offering.
   - 2.258 Relationship of the proposed course to courses now offered by the department: The proposed course will complement and expand on content addressed in physical geography and in the summer Karst Field Studies program.
   - 2.259 Relationship of the proposed course to courses offered in other departments: No similar courses are currently offered.
   - 2.260 Relationship of the proposed course to courses offered in other institutions: Few universities offer a similar course due to the specialized nature of the field, and no university in Kentucky currently offers a similar course. However, a few programs, such as those found at the University of South Florida and Mississippi State University, have a similar type of course offering primarily for graduate-level students.

3. Discussion of proposed course:
   - 3.205 Course objectives:
     • Students will develop a thorough understanding of landforms, processes, and environmental challenges associated with karst landscape/aquifer systems

• Students will understand spatial distribution of the world's karst regions and the geologic/climatic/temporal controls that influence that distribution and the similarities/differences between various karst systems.
• Students will understand principle environmental challenges that influence human development within karst regions, and gain some knowledge of the solutions to these problems
• Students will understand the scientific method and carry out field- and lab-based exercises

3.206 Content outline:

- Introduction to a framework for karst system analysis
- Rocks: Lithologic component of karst evolution
- Fluids: Climatic component of karst evolution
- Geometry: Structural component of karst evolution
- Field Methods: Introduction to cave survey
- Relief: Topographic element of karst evolution
- Karst landscape denudation and evolution
- Time, karst landscape evolution
- Radiogenic and stable isotope applications
- Surface landforms in karst
- Subsurface landforms in karst
- Karst ecology
- Human-landscape interaction
- Karst management and education

3.207 Student expectations and requirements: The course includes several written exams, an individual comparative karst landscape research project, and article discussions.

3.208 Tentative texts and course materials: *Cave Geology* by Art Palmer (2007), and selected readings.

4. Resources:
   4.103 Library resources: See Library Form
   4.104 Computer resources: Internet access

5. Budget implications:
   5.205 Proposed method of staffing: Current staff
   5.206 Special equipment needed: None
   5.207 Expendable materials needed: None
   5.208 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

   Geography and Geology Department _____2/23/2011_____

OCSE Curriculum Committee	_____3/3/2011_____
Undergraduate Curriculum Committee	_____3/24/2011_____
University Senate	_____

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

Ford, D., and P. Williams. (2007). *Karst Hydrogeology and Geomorphology*. John Wiley and Sons Ltd.: West Sussex, England, 2nd ed., 576 p.

Groves, C. and J. Meiman, 2005, Weathering, geomorphic work, and karst landscape evolution in the Cave City groundwater basin, Mammoth Cave, Kentucky. *Geomorphology*, 67. p. 115-126

Kambesis, P. (2007). The importance of cave exploration to scientific research. *Journal of Cave and Karst Studies*, 69(1), 46-58.

Lauritzen, S.E., and Lundberg, J. 1999a. Speleothems and climate: a special issue of the Holocene. *The Holocene* 9: 643-647.

Palmer, A.N. (2003). Speleogenesis in carbonate rocks. *Speleogenesis and Evolution of Karst Aquifers*, 1(1), 1-11.

Palmer, A.N., 2007. *Cave Geology*. Cave Books: Dayton, OH, 454 p.

White, W.B. 1988. *Geomorphology and Hydrology of Karst Terrains*. Oxford University Press: New York, 464 p.

Proposal Date: 2/16/11

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

Contact Person: Daniel Reader e-mail:daniel.reader@wku.edu Phone: 5-2813

Identification of proposed course

Prefix and number: GEOG 489
Title: Alternatives in Sustainability
Abbreviated title: Alternatives in Sustainability
Credit hours: 3 hrs
Type of course: L (Lecture)
Prerequisites: GEOG 280
Catalog course listing: This capstone course for the Minor in Sustainability addresses all aspects of sustainability theory and practice, including problem-solving and decision-making techniques and critical analyses of prominent sustainability plans.

Rationale

- Reason for developing the proposed course:
  This course is being developed as a required capstone course for the Sustainability Minor in the Department of Geography and Geology.

Projected enrollment in the proposed course:
15-20 students per offering based upon previous enrollment in other courses in environmental geography.

Relationship of the proposed course to courses now offered by the department:
The department does not currently offer a capstone course in sustainability. The proposed course will bring together theories and practices introduced in other courses (such as GEOG 280, GEOG 380, and GEOG 474) and focus on critical analyses of various sustainability plans

Relationship of the proposed course to courses offered in other departments:
While there are several courses that variously focus on ecology, environmental issues, or socio-economic problems, there are no courses offered at Western that are similar to or related to applications in sustainability.

Relationship of the proposed course to courses offered in other institutions:
The proposed course is broadly comparable in scope and content to undergraduate courses offered at James Madison University (GEOG 429), Morehead State University (GEOG 345), and Towson University (BIOL 306), and at many larger public and private institutions.

Discussion of proposed course

Course objectives:
Students will gain a more complete understanding of the concepts of sustainability through a critical analysis of current methodologies in the field, culminating in project proposals in sustainability that are relevant, both locally and globally, to their lives in the 21st century.

Content outline:

- Problem Solving in Sustainability
- Values and Decision Making in Sustainability
- Risk Assessment
- Cost-Benefit Analysis
- Outcomes and their Evaluation
- Plan B – A Proposed Alternative
    1. Food as the "weak link"
    2. Fresh Water Shortages
    3. Anthropogenic Climate Change
    4. Energy Alternatives
    5. Urbanization and Livable Cities
    6. Poverty Eradication and the Education of Girls
    7. Ecosystem Restoration
- Other Alternatives

Student expectations and requirements:

Performance will be evaluated based upon two exams, a project proposal, and course participation.

Tentative texts and course materials:

Brown, Lester R. (2010) *Plan B 4.0: Mobilizing to Save Civilization.* Earth Policy Institute, W.W. Norton & Co.: New York. (Free download available. Updated annually.)

Holmgren, D. (2009) *Future Scenarios.* Chelsea Green:White River Junction, VT.

Resources

Library resources: See attached library resource form and bibliography.
Computer resources: No new additional resources required.

Budget implications

Proposed method of staffing: Existing faculty will teach this course.
Special equipment needed: None.
Expendable materials needed: None.
Laboratory supplies needed: None.

Proposed term for implementation: Spring 2012

Dates of committee approvals:

Geography & Geology Department
2/23/2011

OCSE College Curriculum Committee
3/3/2011

University Curriculum Committee
3/24/2011

University Senate

Attachments: Bibliography, Library Resources Form, Course Inventory Form

Proposal Date: October 25, 2010

Ogden College of Science and Engineering
Department of Architectural and Manufacturing Sciences
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: John Khouryieh, hanna.khouryieh@wku.edu, (270)-852-6407

1. Identification of course:

1.17 Current course prefix (subject area) and number: AMS 303
1.18 Course title: Food Regulations
1.19 Credit hours: 3

2. Revise course title:

2.5 Current course title: Food Regulations
2.6 Proposed course title: Food Laws and Regulations
2.7 Proposed abbreviated title: Food Laws and Regulations
2.8 Rationale for revision of course title: There is a difference between laws and regulations. Laws are acts of Congress that have been signed by the President, while regulations are administrative codes or rules issued by governmental agencies to enforce statutes. Teaching food regulations without laws is meaningless. Therefore, students need to be introduced to both laws and regulations.

3. Revise course number: N/A

4. Revise course prerequisites:

4.1 Current prerequisites:
Prerequisites: Chem 105, Bio 207, and 208
4.2 Proposed prerequisite: AMS 301
4.3 Rationale for revision of course prerequisites/corequisites/special requirements: Students only need to know the basic food science principles before taking this course.
4.4 Effect on completion of major/minor sequence: None

5. Revise course catalog listing:

5.4 Current course catalog listing: Provides an understanding of the federal regulation on food manufacturing organizations, including documentation, audits, and controls. Emphasis will be placed on USDA and FDA regulatory requirements.
5.5 Proposed course catalog listing: History, development, and enforcement of major federal food statutes and regulations, with emphasis on the Federal Food, Drug, and Cosmetic Act (FDCA), the Food and Drug Administration (FDA) and the US Department of Agriculture (USDA) regulations.
5.6 Rationale for revision of course catalog listing: The current course catalog listing doesn't correctly describe the course content. Documentation, audits and controls are covered in a different course.

6. **Revise course credit hours: N/A**

7. **Proposed term for implementation:** Spring 2012

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

AMS Department/Division: _____2-4-11_____

OCSE Curriculum Committee _____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Course Inventory Form

Proposal Date: October 25, 2010

Ogden College of Science and Engineering
Department of Architectural and Manufacturing Sciences
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: John Khouryieh, hanna.khouryieh@wku.edu, (270)-852-6407

1. Identification of course:

1.35 Current course prefix (subject area) and number: AMS 352
1.36 Course title: Food Processing I
1.37 Credit hours: 3

2. Revise course title:

2.9 Current course title: Food Processing I
2.10 Proposed course title: Food Processing: Unit Operations
2.11 Proposed abbreviated title: Food Processing: Unit Operations
2.12 Rationale for revision of course title: Adding "unit operations" to the course title makes it more informative and distinguishes it from the other food-processing course.

3. Revise course number: N/A

4. Revise course prerequisites:

4.1 Current prerequisites:
Prerequisites: AMS 342
4.2 Proposed prerequisites:
Prerequisite: AMS 301
4.3 Rationale for revision of course prerequisites/corequisites/special requirements: AMS 342 doesn't cover the unit operations used in the food processing industry. Therefore, the new prerequisite for this course will be AMS 301 Science of Food Processing.
4.4 Effect on completion of major/minor sequence: None

5. Revise course catalog listing:

5.7 Current course catalog listing: An introduction to different manufacturing and processing operations for post-harvest foods, and how each of these operations can be used to increase the supply, distribution, and marketing of food products around the world.
5.8 Proposed course catalog listing: An overview of unit operations and processing techniques used in food processing industry. Topics include thermal processing, low temperature preservation, dehydration, irradiation, enzyme technology, separation and concentration, evaporation and distillation, and high-pressure and minimal processing methods.
5.9 Rationale for revision of course catalog listing: The proposed description provides a more detailed listing of the different processing techniques discussed in the course.

6. **Revise course credit hours: N/A**

7. **Proposed term for implementation:** Spring 2012

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

AMS Department/Division:	_____2-4-11_____
OCSE Curriculum Committee	_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: October 25, 2010

Ogden College of Science and Engineering
Department of Architectural and Manufacturing Sciences
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: John Khouryieh, hanna.khouryieh@wku.edu, (270)-852-6407

1. Identification of course:

1.20 Current course prefix (subject area) and number: AMS 381
1.21 Course title: Food Manufacturing Quality and Safety
1.22 Credit hours: 3

2. Revise course title:

2.13 Current course title: Food Manufacturing Quality and Safety
2.14 Proposed course title: Food Quality Assurance
2.15 Proposed abbreviated title: Food Quality Assurance
2.16 Rationale for revision of course title: The current course title combines two major topics: food quality assurance and food safety. Both cannot be treated thoroughly in one course, so we are removing the food safety content from AMS 381 and including it in the proposed course AMS 395.

3. Revise course number: N/A

4. Revise course prerequisites:

4.1 Current prerequisites:
Prerequisite: AMS 371
4.2 Proposed prerequisites:
Prerequisite: AMS 301 or BIOL 207
4.3 Rationale for revision of course prerequisites:
This new course requires a foundation course in food science or one course in microbiology.
4.4 Effect on completion of major/minor sequence: None

5. Revise course catalog listing:

5.10 Current course catalog listing: Selecting and implementing quality systems in food manufacturing plants in order to ensure product quality and consumer safety.
5.11 Proposed course catalog listing: Theory and application of quality assurance programs for the food processing industry, with emphasis on good manufacturing practices, sanitation programs, and audits.
5.12 Rationale for revision of course catalog listing: The new listing includes more details of the course content and reflects the fact that food safety topics are not the main focus.

6. Revise course credit hours: N/A

7. Proposed term for implementation: Spring 2012

8. Dates of prior committee approvals:

AMS Department/Division: _____2-4-11_____

OCSE Curriculum Committee _____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Course Inventory Form

Proposal Date: October 25, 2010

Ogden College of Science and Engineering
Department of Architectural and Manufacturing Sciences
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: John Khouryieh, hanna.khouryieh@wku.edu, (270)-852-6407

1. Identification of course:
- 1.23 Current course prefix (subject area) and number: AMS 443
- 1.24 Course title: Food Packaging
- 1.25 Credit hours: 3

2. Revise course title: N/A

3. Revise course number: N/A

4. Revise course prerequisites:
- 4.1 Current prerequisites:
  Prerequisites AMS 343
- 4.2 Proposed prerequisites:
  Prerequisite: AMS 301
- 4.3 Rationale for revision of course prerequisites:
  AMS 343 is an automated systems course. It is more important for students to know the basic concepts of food science before they take the food packaging course. Therefore, the AMS 301, Science of Food Processing, should be the prerequisite for food packaging.
- 4.4 Effect on completion of major/minor sequence: None

5. Revise course catalog listing:
- 5.13 Current course catalog listing: Selecting and implementing appropriate packaging and distribution procedures for manufactured food products.
- 5.14 Proposed course catalog listing: Principles of packaging science and technology, packaging materials, machinery and equipment, and packaging requirements applied to preservation and distribution of food products.
- 5.15 Rationale for revision of course catalog listing: The current course catalog listing focuses only on the selection and implementation of packaging. The description does not mention the basic principles of packaging science and technology, packaging machinery and equipment, or packaging requirements, which are an important part of the course content.

6. Revise course credit hours: N/A

7. Proposed term for implementation: Spring 2012

8. Dates of prior committee approvals:

AMS Department/Division: _____2-4-11_____

OCSE Curriculum Committee _____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Course Inventory Form

Proposal Date: October 25, 2010

Ogden College of Science and Engineering
Department of Architectural and Manufacturing Sciences
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: John Khouryieh, hanna.khouryieh@wku.edu, (270)-852-6407

1. Identification of course:

1.38 Current course prefix (subject area) and number: AMS 462
1.39 Course title: Food Processing II
1.40 Credit hours: 3

2. Revise course title:

2.17 Current course title: Food Processing II
2.18 Proposed course title: Commodity Food Processing
2.19 Proposed abbreviated title: Commodity Food Processing
2.20 Rationale for revision of course title: Adding "commodity" to the course title makes it more informative and distinguishes it from the other food-processing course (AMS 352).

3. Revise course number: N/A

4. Revise course prerequisites/corequisites/special requirements: N/A

5. Revise course catalog listing:

5.16 Current course catalog listing: This course will cover the most advanced alternatives to current food processing technologies. It will also review the globalization of America's food supply chain.
5.17 Proposed course catalog listing: Principles of food processing, stages and operations, and product formulations for processing and manufacturing different categories of food products such as beverages, cereals, dairy, meats and poultry, and fruits and vegetables.
5.18 Rationale for revision of course catalog listing: The revised listing provides a more detailed description of the course content, which builds on the content of AMS 352 by applying processing principles to specific commodities.

6. Revise course credit hours: N/A

7. Proposed term for implementation: Spring 2012

8. Dates of prior committee approvals:

AMS Department/Division: _____2-4-11_____

OCSE Curriculum Committee _____

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Course Inventory Form

Proposal Date: 2/15/11

Department Of Geography And Geology
Odgen College Of Science And Engineering
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: Jun Yan e-mail: jun.yan@wku.edu Phone: -55982

1. Identification of course:

1.26 Current course prefix (subject area) and number: GEOG 419
1.27 Course title: GIS Applications Development
1.28 Credit hours: 3

2. Revise course title:

2.21 Current course title: GIS Applications Development
2.22 Proposed course title: GIS Programming
2.23 Proposed abbreviated title: GIS Programming
2.24 Rationale for revision of course title: The GIS industry has progressed from programming with structured computer languages (usually developing a typical applications system) to programming with both structured and advanced scripting languages (such as Python). The new title, *GIS Programming*, covers a broader spectrum than the current title, *GIS Applications Development*. This revised title provides flexibility to cover either structured programming or scripting in future course offerings, although the course emphasizes scripting in GIS.

3. Revise course prerequisites:

3.1 Current prerequisites: GEOG 317, and CS 230 or CS 170
3.2 Proposed prerequisites: GEOG 317 and CS 170
3.3 Rationale for revision of course prerequisites: The revised course, GIS Programming, will cover Python scripting in ArcGIS. To keep up with the changes in the GIS industry, prior skills in Python are required. CS 170 covers Python programming. CS 230 is dropped as a prerequisite as it covers Visual Basic.NET.
3.4 Effect on completion of major/minor sequence: None.

4. Proposed term for implementation: Spring 2012

5. Dates of prior committee approvals:

Geography and Geology Department: _____2/23/2011_____

OCSE Curriculum Committee _____3/3/2011_____

Undergraduate Curriculum Committee _____3/25/2011_____

University Senate _____

Attachment: Course Inventory Form

Proposal Date: 01/13/2010

Ogden College of Science and Engineering
Department of Mathematics and Computer Science
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: Mikhail Khenner e-mail: mikhail.khenner@wku.edu Phone: 745-2797
Nezam Iraniparast e-mail: nezam.iraniparast@wku.edu Phone: 745-6281

1. Identification of course:

1.29 Current course prefix (subject area) and number: MATH 431
1.30 Course title: Intermediate Analysis I
1.31 Credit hours: 3.00

2. Revise course title: NA

2.25 Current course title: NA
2.26 Proposed course title: NA
2.27 Proposed abbreviated title: NA
2.28 Rationale for revision of course title: NA

3. Revise course number: NA

3.4 Current course number: NA
3.5 Proposed course number: NA
3.6 Rationale for revision of course number: NA

4. Revise course prerequisites/corequisites/special requirements:

4.1 Current prerequisite:
MATH 317, Introduction to Algebraic Systems.
4.2 Proposed prerequisite:
MATH 337, Elements of Real Analysis.
4.3 Rationale for revision of course prerequisite:
The newly created MATH 337 will serve as a bridge course to facilitate the transition from calculus to analysis. Thus MATH 337 will offer better preparation for MATH 431.
4.4 Effect on completion of major/minor sequence: None

5. Revise course catalog listing:

5.19 Current course catalog listing:
Topics chosen from cardinality, limits, continuity, elementary topological concepts, sequences and series, differentiation and integration, elementary functional analysis.
5.20 Proposed course catalog listing:

Topics in analysis chosen from inverse and implicit function theorems, differentiation, integration, infinite series, series of functions, and elementary functional analysis.

5.21 Rationale for revision of course catalog listing:
Some elementary topics are being moved from MATH 431 to MATH 337, allowing other topics to be studied in greater depth.

6. Revise course credit hours: NA

6.4 Current course credit hours: NA
6.5 Proposed course credit hours: NA
6.6 Rationale for revision of course credit hours: NA

7. Proposed term for implementation: Spring 2012

8. Dates of prior committee approvals:

Mathematics and Computer Science Department 4-30-10

Ogden College Curriculum Committee 3-3-11

Professional Education Council 3-16-11

Undergraduate Curriculum Committee 3-24-11

University Senate _____

Attachment: Course Inventory Form

Proposal Date: 01/13/2011

Ogden College of Science and Engineering
Department of Mathematics and Computer Science
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: Mikhail Khenner e-mail: mikhail.khenner@wku.edu Phone: 745-2797
Nezam Iraniparast e-mail: nezam.iraniparast@wku.edu Phone: 745-6281

1. Identification of course:

1.32 Current course prefix (subject area) and number: MATH 432
1.33 Course title: Intermediate Analysis II
1.34 Credit hours: 3.00

2. Revise course title:

2.29 Current course title: Intermediate Analysis II
2.30 Proposed course title: Introduction to Measure Theory
2.31 Proposed abbreviated title: Intro. to Measure Theory
2.32 Rationale for revision of course title:
The new title better reflects the place and function of the course in the current sequence of analysis courses: MATH 337, Elements of Real Analysis; MATH 431, Intermediate Analysis I (changing to Intermediate Analysis); MATH 432, Introduction to Measure Theory.

3. Revise course number:

3.7 Current course number: NA
3.8 Proposed course number: NA
3.9 Rationale for revision of course number: NA

4. Revise course prerequisites/corequisites/special requirements: NA

4.1 Current prerequisite: NA
4.2 Proposed prerequisite: NA
4.3 Rationale for revision of course prerequisite: NA
4.4 Effect on completion of major/minor sequence: NA

5. Revise course catalog listing:

5.22 Current course catalog listing: Continuation of MATH 431
5.23 Proposed course catalog listing:
Algebra of sets, axiom of choice, axioms for the real numbers, continuous functions, Borel sets, Lebesgue measure, Lebesgue integral.
5.24 Rationale for revision of course catalog listing:
The current listing is not specific, which often leads to misunderstanding and confusion on the part of students. Introduction to Measure theory is a more

advanced study of the mathematical analysis, and is well suited to appear after the two foundational analysis courses MATH 337 and 431.

6. Revise course credit hours: NA

6.7 Current course credit hours: NA
6.8 Proposed course credit hours: NA
6.9 Rationale for revision of course credit hours: NA

7. Proposed term for implementation: Spring 2012

8. Dates of prior committee approvals:

Mathematics and Computer Science Department	1-21-11
Ogden College Curriculum Committee	3-3-11
Professional Education Council	3-16-11
Undergraduate Curriculum Committee	3-24-11
University Senate	

Attachment: Course Inventory Form

Proposal Date: 11/5/10

Ogden College of Science and Engineering
Department of Mathematics and Computer Science
Proposal to Revise Course Credit Hours
(Action Item)

Contact Person: Nezam Iraniparast nezam.iraniparast@wku.edu Phone: 56218

1. Identification of course:

1.1 Current course prefix (subject area) and number: MATH 498
1.2 Course title: Senior Seminar
1.3 Credit hours: 1

2. Proposed course credit hours: 3

3. Rationale for the revision of course credit hours:

Students in this class study the appropriate literature and conduct original/expository research. Their grades are based on a 25-minute presentation and a 7-11 page (single spaced) paper that must be typed with a technical word processor. Almost all presentations are made using Power Point. Recently, we have added more requirements to the students' obligations. For the purpose of keeping the students on task, we now require two additional presentations and attendance at the talks given by others in the class. Even before adding these new requirements, some faculty members believed MATH 498 students deserved more than one hour of credit. With these new changes, the department is convinced that the amount of work involved warrants three credit hours instead of one.

4. Proposed term for implementation: Spring 2012

5. Dates of prior committee approvals:

Mathematics and Computer Science Department ___11-15-10_____

OCSE Curriculum Committee ___3-3-11_____

Professional Education Council ___3-16-11_____

Undergraduate Curriculum Committee ___3-24-11_____

University Senate _____

Attachment: Course Inventory Form

Proposal Date: October 25, 2010

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:

1.1 Current program reference number: 506
1.2 Current program title: Advanced Manufacturing
1.3 Credit hours: 78

2. Identification of the proposed program changes:

Changes for all concentrations

- Reduce total number of hours from 124 to 120
- Reduce total number of hours in the major to 74

Changes for Food Automation and Manufacturing Concentration

- Change the title of the concentration from Food Automation and Manufacturing to Food Processing and Technology.
- Add AMS 394 Lean Manufacturing and AMS 396 Introduction to Supply Chain Management to management core.
- Increase the number of hours in the management core from 24 to 30.
- Add Fundamentals of AMS 395 HACCP to concentration course list.
- Remove AMS 342 Manufacturing Operations and AMS 392 Quality Management from concentration course list.
- Change titles of AMS 303, AMS 352, AMS 381 and AMS 462 to reflect approved curriculum revisions.
- Reduce the number of advisor-approved electives in the concentration list from 8 to 1.
- Reduce the number of hours of concentration courses from 35 to 25.
- Require Fundamentals of Chemistry Lab CHEM 106, thereby increasing the general education hours from 45 to 46.

Changes for Manufacturing and Industrial Distribution Concentration

- Relocate AMS 394 Lean Manufacturing and AMS 396 Introduction to Supply Chain Management from list of concentration courses to management core.
- Change name of AMS 217 from Materials of Manufacturing to Industrial Materials
- Reduce the number of advisor-approved elective hours from 14 to 10.
- Increase the number of hours in the management core from 24 to 30
- Reduce the number of hours of concentration courses from 35 to 25.

Changes for the Quality Systems Concentration

- Add Introduction to AMS 396 Supply Chain Management to management core
- Relocate AMS 394 Lean Manufacturing from concentration to management core.

- Change Name of AMS 217 from Materials of Manufacturing to Industrial Materials
- Reduce number of advisor-approved elective hours from 16 to 7.
- Increase the number of hours in the management core from 24 to 30
- Reduce the number of hours of concentration courses from 35 to 25.
- Increase the number of elective hours in the program from 0 to 2.

3. Detailed program description:

Advanced Manufacturing Food Automation & Manufacturing	(OLD)	79
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: 24hrs		
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
Food Automation & Manufacturing Conc: 35hrs		
Science of Food Processing	AMS 301	3
Food Regulations	**AMS 303**	**3**

Advanced Manufacturing Food Processing and Technology	(NEW)
Technical Core: 19hrs	
Introductory Accounting - Financial	ACCT200
Basic Electricity	AMS120
Architectural Drafting or CADD for Manufacturing	AMS 163/205
Industrial Statistics	AMS271
Internship I	AMS398
Senior Research	AMS490
Robotics and Machine Vision	AMS 328
Management Core: 30hrs	
Work Design/Ergonomics	AMS310
Systems Design and Operation	AMS356
Project Management	AMS390
Technology Mgmt./Sup./Team Blding	AMS430
Business Writing or Technical Writing	ENG 306 or 307
Advanced Public Speaking	COMM345
Business Law	MGT301
Quality Assurance	AMS371
Lean Manufacturing	**AMS 394**
Intro to Supply Chain Management	**AMS 396**
Food Processing and Technology Conc: 25hrs	
Science of Food Processing	AMS 301
Food Laws and Regulations	**AMS 303**

Manufacturing Operations	**AMS 342**	**3**
Automated Systems	AMS 343	3
Food Processing I	**AMS 352**	**3**
Food Manufacturing Quality & Safety	**AMS 381**	**3**
Quality Management	**AMS 392**	**3**
Food Packaging	AMS 443	3
Food Processing II	**AMS 462**	**3**
Advisor Approved Electives		**8**
General Education (New)	45 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
	BIO 207	3
	BIO 208	1
Category E	Category E	3
Category F	SFTY171	1
	Category F	1
Electives		
Electives		0
Program Grand Total Hours:		**124**

Automated Systems	AMS 343
Food Processing: Unit Operations	**AMS 352**
Fundamentals of HACCP	**AMS 395**
Food Quality Assurance	**AMS 381**
Food Packaging	AMS 443
Commodity Food Processing	**AMS 462**
Advisor Approved Electives	
General Education (New)	46 hrs
Category A	ENG100
	ENG300
	Foreign Lang
	Public Speaking
Category B	Lit. Elective
	Category B-II
	Category B-II
Category C	HIST119/120
	ECON202
	Category C
Category D	MATH 117, or MATH 118 OR HIGHER
	CHEM 105
	CHEM 106
	BIO 207
	BIO 208
Category E	Category E
Category F	SFTY171
	Category F
Electives	
Electives	
Program Grand Total Hours:	

Advanced Manufacturing (OLD) Manufacturing & Industrial Distribution		78
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: 24hrs		
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
Manufacturing & Industrial Distribution Conc: 35hrs		
Materials of Manufacturing	**AMS217**	**3**
Manufacturing Methods	AMS227	3
Manufacturing Operations	AMS342	3
Automated Systems	AMS343	3
Computer Numeric Control	AMS370	3
Lean Manufacturing	**AMS394**	**3**
Intro to Supply Chain Management	**AMS396**	**3**
Advisor Approved Electives		**14**
General Education (New)	46 hrs	
Category A	ENG100	3

Advanced Manufacturing (NEW) Manufacturing & Industrial Distribution	
Technical Core: 19hrs	
Introductory Accounting - Financial	ACCT200
Basic Electricity	AMS120
Architectural Drafting or CADD for Manufacturing	AMS 163/205
Industrial Statistics	AMS271
Internship I	AMS398
Senior Research	AMS490
Robotics and Machine Vision	AMS 328
Management Core: 30hrs	
Work Design/Ergonomics	AMS310
Systems Design and Operation	AMS356
Project Management	AMS390
Technology Mgmt./Sup./Team Blding	AMS430
Business Writing or Technical Writing	ENG 306 or 307
Advanced Public Speaking	COMM345
Business Law	MGT301
Quality Assurance	AMS371
Lean Manufacturing	**AMS 394**
Intro to Supply Chain Management	**AMS 396**
Manufacturing & Industrial Distribution Conc: 25hrs	
Industrial Materials	**AMS217**
Manufacturing Methods	AMS227
Manufacturing Operations	AMS342
Automated Systems	AMS343
Computer Numeric Control	AMS370
Advisor Approved Electives	
General Education (New)	46 hrs
Category A	ENG100

	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 116	3
	CHEM 106	1
	PHYS201	4
Category E	Category E	3
Category F	SFTY171	1
	Category F	1
Electives		
Electives		0
Program Grand Total Hours:		**124**

	ENG300
	Foreign Lang
	Public Speaking
Category B	Lit. Elective
	Category B-II
	Category B-II
Category C	HIST119/120
	ECON202
	Category C
Category D	MATH 117, or MATH 118 OR HIGHER
	CHEM 116
	CHEM 106
	PHYS201
Category E	Category E
Category F	SFTY171
	Category F
Electives	
Electives	
Program Grand Total Hours:	

Advanced Manufacturing Quality Systems	(OLD)	80
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: 24hrs		
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
Quality Systems Conc: 37hrs		
Materials of Manufacturing	**AMS217**	**3**
Manufacturing Operations	AMS342	3
Computer Numeric Control	AMS370	3
Reliability & Probability	AMS 391	3
Quality Management	AMS392	3
Lean Manufacturing	**AMS394**	**3**
Design of Industrial Experiments	AMS471	3
Advisor Approved Electives		**16**
General Education (New)	44hrs	
Category A	ENG100	3

Advanced Manufacturing Quality Systems	(NEW)
Technical Core: 19hrs	
Introductory Accounting - Financial	ACCT200
Basic Electricity	AMS120
Architectural Drafting or CADD for Manufacturing	AMS 163/205
Industrial Statistics	AMS271
Internship I	AMS398
Senior Research	AMS490
Robotics and Machine Vision	AMS 328
Management Core: 30hrs	
Work Design/Ergonomics	AMS310
Systems Design and Operation	AMS356
Project Management	AMS390
Technology Mgmt./Sup./Team Blding	AMS430
Business Writing or Technical Writing	ENG 306 or 307
Advanced Public Speaking	COMM345
Business Law	MGT301
Quality Assurance	AMS371
Lean Manufacturing	**AMS 394**
Intro to Supply Chain Management	**AMS 396**
Quality Systems Conc: 25hrs	
Industrial Materials	**AMS217**
Manufacturing Operations	AMS342
Computer Numeric Control	AMS370
Reliability & Probability	AMS 391
Quality Management	AMS392
Design of Industrial Experiments	AMS471
Advisor Approved Electives	
General Education (New)	44 hrs
Category A	ENG100

	ENG300	3			ENG300
	Foreign Lang	3			Foreign Lang
	Public Speaking	3			Public Speaking
Category B	Lit. Elective	3	Category B		Lit. Elective
	Category B-II	3			Category B-II
	Category B-II	3			Category B-II
Category C	HIST119/120	3	Category C		HIST119/120
	ECON202	3			ECON202
	Category C	3			Category C
Category D	MATH 117, or MATH 118 OR HIGHER	3	Category D		MATH 117, or MATH 118 OR HIGHER
	Category D-II	3			Category D-II
	Category Dl-l	3			Category Dl-l
Category E	Category E	3	Category E		Category E
Category F	SFTY171	1	Category F		SFTY171
	Category F	1			Category F
Electives			Electives		
Electives		**0**	**Electives**		
Program Grand Total Hours:		**124**	**Program Grand Total Hours:**		

4. Rationale for the proposed program change:

Advanced Manufacturing Program overview

The proposed structure of the undergraduate Advanced Manufacturing Program will include 120 credit hours divided into 74 credit hours for the major and 46 credit hours for general education. The Advanced Manufacturing Program consists of three concentrations: 1) Food Automation and Manufacturing, 2) Manufacturing and Industrial Distribution, and 3) Quality Systems. Each concentration is divided into a technical core, a management core and a concentration core. The technical core and management core must be similar for the three concentrations. Therefore, any changes to one concentration must result in changes to the other two concentrations.

Food Automation & Manufacturing Concentration overview

The Food Automation and Manufacturing Concentration was initially established through an initiative from Dr. Greg Arbuckle in 2008 so that the department could respond to the needs of the food processing industry in Kentucky for trained graduates in the area of food processing. The successful launch of the food concentration, recruitment of a food scientist, and establishment of a strong advisory board from the food industry indicate

that the initial decision was a wise one. However, the enrollment needs to be further improved. Discussions with current students and advisors indicated that students wrongly think that they will be working on a production line after graduation if they major in food automation and manufacturing. Therefore, the changes for the current food automation and manufacturing concentration are necessary to eliminate this misconception, increase the students' enrollment in the concentration, and improve its quality as well.

- The change in title from Food Automation and Manufacturing to Food Processing and Technology will greatly increase the visibility and influence of this concentration, thereby attracting highly qualified students, along with more food industry professionals. The change will also allow for greater opportunities for interdisciplinary education and research with the Departments of Agriculture and Chemistry and increase the number of potential food industry donors to the program.
- AMS 394 Lean Manufacturing and AMS 396 Introduction to Supply Chain Management are being added to the curriculum to address the concerns of food industry managers, who have indicated that having employees with backgrounds in those areas would add value to the production environment and that such courses would be beneficial for graduates seeking managerial positions in the food industry.
- The number of hours in the management core is increasing from 24 to 30 because we are adding AMS 394 and AMS 396 to the list of required courses.
- HACCP is a prevention food system, which has been mandated by the USDA and FDA for the nation's meat, poultry, seafood and juice processors. With the addition of AMS 395 Fundamentals of HACCP, students will be trained and prepared to take responsibility in the food industry for proper food handling.
- Manufacturing Operations AMS 342 does not cover the unit operations used in the food industry, so it is being removed from the program. We currently require AMS 381 Food Quality Assurance and AMS 371 Quality Assurance in this program. To prevent redundancy we are removing AMS 392 Quality Management.
- The titles of AMS 303, AMS 352, AMS 381 and AMS 462 have been changed in the detailed program description to reflect previous revisions.
- To bring the total number of credit hours for graduation to 120, the number of advisor-approved elective hours has been reduced from 8 to 1.
- The number of hours of concentration courses is being reduced from 35 to 25 because AMS 342 and AMS 392 were removed, AMS 395 was added, and the number of elective hours was reduced.

Manufacturing and Industrial Distribution overview

The main changes in this concentration arose from the need to align its technical and management cores with those of the revised Food Processing and Technology Concentration. Another goal was to create a 74-hour major and a 120-hour undergraduate program.

- AMS 394 Lean Manufacturing and AMS 396 Introduction to Supply Chain Management were relocated from the list of concentration courses to the management core to match the course distribution in the revised Food Processing and Technology Concentration.

- The number of advisor-approved elective hours was reduced from 14 to 10 so that the total number of hours in the major would be 74.
- The change in the number of hours in the management core (from 24 to 30) and in the concentration courses (from 35 to 25) is the result of the relocation of AMS 394 and AMS 396 and the reduction in the number of advisor-approved elective hours.

Quality System Concentration Overview
The main changes in this concentration arose from the need to align its technical and management cores with those of the revised Food Processing and Technology Concentration. Another goal was to create a 74-hour major and a 120-hour undergraduate program.

- AMS 394 Lean Manufacturing and AMS 396 Introduction to Supply Chain Management were relocated from the list of concentration courses to the management core to match the course distribution in the revised Food Processing and Technology Concentration.
- The number of advisor-approved elective hours was reduced from 16 to 7 so that the total number of hours in the major would be 74.
- The change is the number of hours in the management core (from 24 to 30) and in the concentration courses (from 35 to 25) is the result of the relocation of AMS 394 and AMS 396 and the reduction in the number of advisor-approved elective hours.
- The number of elective hours was increased from 0 to 2 so that the total number of hours in the undergraduate program would be 120.

5. Proposed term for implementation and special provisions: Fall 2011

6. Dates of prior committee approvals:

AMS Department/Division: 2-4-11

OCSE Curriculum Committee 3-3-11

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Program Inventory Form

Proposal Date: 1/3/2011

Ogden College of Science and Engineering
Department of Engineering
Proposal to Revise a Program
(Action Item)

Contact Person: Mark Cambron email: mark.cambron@wku.edu phone: 5-8868

1. Identification of program

1.1 Reference Number: 537
1.2 Current Program Title: Electrical Engineering
1.3 Credit Hours: 62

2. Identification of the proposed program changes:

- Remove MATH 450 from being required with MATH 307 as an option for MATH 350
- Allow either EE 473 or PHYS 440
- Include ENGR 175 on University Experience options
- Replace EM 221 (or EM 222) and ME 365 with a list of science and engineering electives
- Modify the standards required to transition from being an Electrical Engineering – Prep major to an Electrical Engineering major.

3. Detailed program description:

Current Program			**Proposed Program**		
			ENGR 175	**University Experience*, and**	**1**
			EE 101	**Design I**	**1**
				or	
EE175	University Experience - EE	2	EE175	University Experience - EE	2
	or			or	
UC 175	University Experience*,and	2	UC 175	University Experience*,and	2
EE 101	Design I	1	EE 101	Design I	1
EE180	Digital Circuits	4	EE180	Digital Circuits	4
EE200	Design II	1	EE200	Design II	1
EE210	Circuits & Networks I	3.5	EE210	Circuits & Networks I	3.5
EE211	Circuits & Networks II	3.5	EE211	Circuits & Networks II	3.5
EE300	Design III	1	EE300	Design III	1
EE345	Electronics	4	EE345	Electronics	4
EE431	Intro. to Power Systems	3	EE431	Intro. to Power Systems	3
EE380	Microprocessors	4	EE380	Microprocessors	4
EE400	Design IV	1	EE400	Design IV	1
EE401	Senior Design	3	EE401	Senior Design	3
EE405	EE Senior Research Seminar	1	EE405	EE Senior Research Seminar	1
EE420	Signals & Linear Systems	3	EE420	Signals & Linear Systems	3
EE450	Digital Signal Proc.	3	EE450	Digital Signal Proc.	3
EE451	Digital Signal Proc. Lab	1			

EE460 Cont. Control Systems 4 EE470 Communications 3 EE473 EM Fields & Waves 3 EE475 Communications Lab 1 EE479 Fund. Of Optoelectronics 2 EE Technical Electives 6 **Statics EM 221 or EM 222 3** **ME365 Thermal Science for EE 3** **Tech. Course Total: 62** **<u>Other Requirements</u>** MATH136 Calculus I 4 MATH137 Calculus II 4 MATH237 Multivariable Calculus 4 MATH331 Differential Equations 3 MATH350 Advanced Engr. Math 3 or MATH307 Intro. Linear Algebra **and** 3 **MATH450 Complex Variables 3** STAT301 Probability & Statistics 3 PHYS255 University Physics I 4 PHYS256 University Physics I Lab 1 PHYS265 University Physics II 4 Science Elective 3 CS239 Prob Solving Comp Tech 3 ECON ECON 202 or ECON 203 3 **Other Hours: 39**	EE451 Digital Signal Proc. Lab 1 EE460 Cont. Control Systems 4 EE470 Communications 3 EE473 EM Fields & Waves 3 **or** **PHYS 440 Electricity and Magnetism 3** EE475 Communications Lab 1 EE479 Fund. Of Optoelectronics 2 EE Technical Electives 6 **Engineering/Science Electives 6** **Tech. Course Total: 62** **<u>Other Requirements</u>** MATH136 Calculus I 4 MATH137 Calculus II 4 MATH237 Multivariable Calculus 4 MATH331 Differential Equations 3 MATH350 Advanced Engr. Math 3 or MATH307 Intro. Linear Algebra 3 STAT301 Probability & Statistics 3 PHYS255 University Physics I 4 PHYS256 University Physics I Lab 1 PHYS265 University Physics II 4 Science Elective 3 CS239 Prob Solving Comp Tech 3 ECON ECON 202 or ECON 203 3 **Other Hours: 39**

*EE/UC/**ENGR 175** is not required for transfer students.

Engineering/Science Electives (take at least 6 hours)

EM 221 or EM 222 or PHYS 350	3
ME 365 or ME 220 or PHYS 330	3
ME 240 Materials and Methods of Manufacturing	3
ME 330 or CE 341 or CE 342	3
PHYS450 Classical Mechanics II	3
PHYS 318 Data Acquisition Using Labview	3

Current	**Proposed**
Academic Standards for the WKU/UofL Joint Electrical Engineering Program Students are admitted as pre-major in Electrical Engineering. In order to transition from the pre-major to major and to graduate with a degree in Electrical Engineering, students must complete the following courses **with a GPA of 2.5 in these courses and** a grade of "C" or better in each course.	**Academic Standards for the WKU/UofL Joint Electrical Engineering Program** Students are admitted as pre-major in Electrical Engineering. In order to transition from the pre-major to major and to graduate with a degree in Electrical Engineering, students must complete the following courses **earning** a grade of "C" or better. in each course.
EE 175 Univ Experience -EE 2 hrs. (or EE 101 for transfer students)	**EE 101 EE Design I 1 hr.** **or** EE 175 University Experience – EE 2 hrs.
EE 180 Digital Circuits 4 hrs.	EE 180 Digital Circuits 4 hrs.
	EE 210 Circuits & Networks I 3.5 hrs.
ENG 100 Composition 3 hrs.	ENG 100 Composition 3 hrs.
COMM 145or161 Public Speaking 3 hrs.	COMM 145or161 Public Speaking 3 hrs.
MATH 136 Calculus I 4 hrs.	MATH 136 Calculus I* 4 hrs.
MATH 137 Calculus II 4 hrs.	MATH 137 Calculus II* 4 hrs.
PHYS 255/256 Physics I/Lab 4 hrs.	PHYS 255/256 Physics I/Lab* 4 hrs.
PHYS 265 Physics II 4 hrs.	PHYS 265 Physics II* 4 hrs.
CS 239 Problem Solving Comp Tech 3 hrs.	CS 239 Problem Solving Comp Tech 3 hrs.

HIST 119 or 120 Western Civilization 3 hrs.	*Older versions of Calculus and Physics are allowed (MATH 126, MATH 227, PHYS 250/251, PHYS 260/261)

4. Rationale for the proposed program change:

- EE students will no longer be required to take both MATH 307 and MATH 450 if they do not take MATH 350.

- Topics in PHYS 440 are an acceptable substitute for EE 473. This flexibility will assist students double majoring in physics and electrical engineering.

- EE students will be encouraged to take ENGR 175 University Experience for Engineers. Students will be allowed to take UC 175 and transfers will not be required to take a University Experience course.

- EE students will be required to take at least 6 hours from a list of science and engineering electives which include EM 221 (or EM 222) and ME 365 among other appropriate courses.

- Modify the standards required to transition from being an Electrical Engineering – Prep major to an Electrical Engineering major.

  The design experiences included in EE 101 or EE 175 are essential for students being admitted into the EE Program.

  EE 210 has been added to the list of courses required to transition from an EE pre-major to an EE major because success in EE 210 is vital for an EE major. Students who successfully complete EE 210 are likely to graduate with an EE degree.

  HIST 119 or HIST 120 has been removed from the list of courses required to transition from an EE pre-major to an EE major. It is acceptable for EE students to fulfill this general educational requirement at any point in their undergraduate experience.

  A minimum GPA of 2.5 is no longer required to transition from an EE pre-major to an EE major. The EE program has no data to confirm that a minimum GPA of 2.5 in pre-major courses guarantees success. The EE faculty prefer that a "C" or better be required in these courses.

5. Proposed term for implementation and special provisions: Fall 2011

6. Dates of prior committee approvals:

Department of Engineering 8 February 2011

Ogden College Curriculum Committee	3 March 2011
Undergraduate Curriculum Committee	
University Senate	

Attachment: Program Inventory Form

Proposal Date: February 11, 2011

Ogden College of Science and Engineering
Department of Geography and Geology
Proposal to Revise a Program
(Action Item)

Contact Person: David Keeling (david.keeling@wku.edu) 745-4555

1. Identification of program:

1.35 Current program reference number: 363
1.36 Current program title: Environmental Studies Minor
1.37 Credit hours: 25

2. Identification of the proposed program changes:

- Revise the program structure to recognize new core and elective options.

3. Detailed program description:

Requirements: The environmental studies minor consists of 25 semester hours including a 13 hour core and 12 hours of electives. A. The core of the curriculum is founded on the selection of one of the following courses intended to provide an overview of the environmental field: ENV 280, PH 280, CHEM 280, GEOG 280, GEOL 280. These courses present a common body of basic environmental science and its applications but with different emphases, allowing a student to select that which most closely parallels his/her individual interests. The selected course should be taken during the fall semester of the second year and no later than the fall semester of the third year. B. The following course illuminates the relationship of environmental issues to social science: ECON 202. C. The capstone of the program is the senior environmental seminar to be taken in the spring semester of the final year. The senior seminar will be offered on a rotating basis by the several departments of Ogden College participating in the minor program. The course is cross-listed in each of those departments	***Requirements:* The environmental studies minor requires 25 semester hours, including a 13-hour core and 12 hours of electives. Students must have at least 12 hours of coursework from outside their major program. A minimum of 13 hours must be upper division courses.** **Core Courses: 13 hours** **A. Introduction to Environmental Science 3** **ENV 280, PH 280, CHEM 280, or GEOG 280** **These courses present basic environmental concepts and their applications but with different emphases, allowing a student to select that which most closely parallels his/her individual interests.** **B. Biological Concepts: Evolution, Diversity, Ecology 4** **BIOL 122/123 (with lab)** **The selected courses above should be taken during the sophomore year and no later than the fall semester of the third year.** **C. Earth Science course 3** **GEOG 100 or GEOG 121 or GEOL 102 or GEOL 111**

course listings as number 486. D**.** The remainder of the core consists of these courses: ENV 495 and ENV 460. These courses should be taken during the final year of the minor. All students pursuing the environmental studies minor must complete at least three semester hours of chemistry with a separate laboratory course. The remaining hours of the minor are to be selected from the list of courses identified from the offerings of the several science departments. The specific courses to be taken will be determined after consultation with one of the environmental studies minor advisors. A sufficient number of offerings has been identified to allow the selection of a sequence which corresponds closely to the students interests. Elective courses (selected from courses outside of the major department) 12-14 hours: Department of Agriculture [AGRO 350 (4 hours); AGRO 454 (3 hours)]; Department of Biology [BIOL 315 (4 hours); BIOL 207/208 (3 hours & 1 hour lab); BIOL 420 (3 hours); BIOL 472 (4 hours)]; Department of Chemistry [CHEM 314 (5 hours); CHEM 330 (5 hours); CHEM 432 (3 hours)]; Department of Geography and Geology [GEOG 100 (3 hours); GEOL 102 or GEOL 111 (3 hours) with lab GEOL 113 (1 hour); GEOG 121 (3 hours); GEOG 328 (3 hours); GEOL 415 (3 hours); GEOL 310)]; Department of Public Health [PH 384 (3 hours); ENV 360 (3 hours) ENV 410 (3 hours); ENV 480 (3 hours) ENV 360 (3 hours).	**These courses present a common body of basic earth science but with different emphases.** **D. Practicum Experience 3** **BIOL 369 or 389 (3)** **Cooperative Education in Biology** **OR GEOG 495 (3)** **Supervised Practicum** **OR CHEM 489 (3)** **Cooperative Education in Chemistry** **OR ENV 475 or 491 (3)** **Special topics/Practicum** **An approved capstone project, supervised practicum, or cooperative education experience in the senior year.** **Elective Courses: 12 hours** **The remaining 12 hours of the minor are to be selected from the list of courses identified from the offerings of several departments. The specific courses to be taken will be determined after consultation with one of the environmental studies minor advisors. A sufficient number of offerings has been identified to allow the selection of a sequence that corresponds closely to the students interests. At least two departments must be represented in the 12 hours of elective coursework.** **Department of Agriculture:** **AGRO 350/351 Soils (3) and Soils Lab (1)** **AGRO 454 Soil Management (3)** **Department of Architectural and Manufacturing Sciences:** **AMS 470 Land Development (3)** **Department of Biology:** **BIOL 207/208 Microbiology (3) and Lab (1)** **BIOL 315 Ecology (4.5)** **BIOL 420 Toxicology (3 hours)** **BIOL 446 Biochemistry (3) and Lab (2)** **Department of Chemistry:** **CHEM 314 Intro Organic Chemistry (5)** **CHEM 446 Biochemistry (3) and Lab (2)**

	Department of Engineering: **CE 351 Intro Environmental Engineering (3)** **Department of Geography and Geology:** **GEOG 328 Biogeography (3)** **GEOG 427 Water Resources (3)** **GEOG 455 Global Environmental Change (3)** **GEOG 474 Environmental Planning (3)** **GEOL/GEOG 310 Global Hydrology (3)** **GEOL 415 Environmental Geology (3)** **Department of Public Health:** **ENV 375 Water Resources (3)** **ENV 460 Environmental Management (3)** **ENV 480 Hazardous and Solid Waste (3)** **PH 385 Environmental Health (3)** **Department of Philosophy and Religion** **RELS 408 Religion and Ecology (3)**

4. **Rationale for the proposed program change:** As WKU and the wider community focus increasingly on issues of sustainability and environmental awareness, students seek additional opportunities to develop skills in the general area of environmental studies. The existing minor is being revised to better suit the needs of students majoring within Ogden College, but will also be attractive to students majoring in other disciplines beyond Ogden. The revised program will focus more specifically on the physical science aspects of the environment, while the Minor in Sustainability focuses more specifically on principles, theories, ethics, and empirical case studies.

5. **Proposed term for implementation and special provisions (if applicable):** Fall 2011

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

Department of Geography and Geology: ____2/23/2011_____

Ogden Curriculum Committee ____3/3/2011_____

Undergraduate Curriculum Committee ____3/24/2011_____

University Senate _____

Attachment: Program Inventory Form

Proposal Date: February 11, 2011

Ogden College of Science and Engineering
Department of Geography and Geology
Proposal to Revise a Program
(Action Item)

Contact Person: Chris Groves, Chris.groves@wku.edu, 5-5974

1. Identification of program:

1.38 Current program reference number: 674
1.39 Current program title: Geography
1.40 Credit hours: 36

2. Identification of the proposed program changes:

- Add a new concentration in karst geosciences.
- Change concentration title from Environment and Sustainable Development to Environmental Planning and Resource Management.
- Add electives to two concentrations: GEOG 459 Physical Hydrology and GEOG 461 Karst Environments.

3. Detailed program description:

	Karst Geoscience **■ Foundation Requirements 13 hours** **GEOG 100 or GEOL 102** **or GEOL 111 Physical Geo. (3)** **GEOG 110 World Regional Geog. (3)** **GEOG 280 Environmental Science (3)** **GEOG 475 Mammoth Cave Karst (3)** **(Summer Field Course)** **GEOG 499 Professional Development (1)** **■ Thematic Requirements 9-10 hours** **GEOG 310 Hydrology (3)** **OR** **GEOG 459 Physical Hydrology (3)** **GEOG 461 Karst Environments (3)** **GEOG 420 Geomorphology (4)** **OR** **GEOG 475 Mammoth Cave Karst (3)** **(Summer Field Course)** **■ Technique Requirements 10 hours** **GEOG 300 Research (3)** **GEOG 316 Foundations GIS (4)** **GEOG 391 Data Analysis (3)** **■ Approved Electives 3-4 hours** **GEOG 208 Floods and Droughts (1)**

	GEOG 209 Natural Disasters (1) **GEOG 317 GIS (4)** **GEOG 414 Remote Sensing (4)** **GEOG 417 GIS Analysis (3)** **GEOG 419 GIS Applications (3)** **GEOG 444 Environmental Ethics (3)** **GEOG 452 Field Methods (3)** **GEOG 455 Global Env. Change (3)** **GEOG 471 Resource Management (3)** **GEOG 474 Env. Planning (3)** **GEOG 489 Env. Law & Policy (3)** **GEOL 415 Env. Geology (3)** **GEOL 445 Aqueous Geochemistry (3)** **Program Total 36 hours** **Additional requirements: MATH 136, CHEM 120, and BIOL 120 OR PHYS 201**
Cultural Geography ■ Foundation Requirements 14 hours GEOG 100 or GEOL 102 Physical (3) GEOG 110 World Regional Geog. (3) GEOG 330 Intro to Cultural (3) GEOG 430 Topics in Cultural (3) GEOG 475 or 495 Practicum or Research (1) GEOG 499 Professional Development (1) ■ Regional Requirements 6 hours Choose two courses from: GEOG 200 Latin America (3) GEOG 360 North America (3) GEOG 451 Kentucky (3) GEOG 454 Middle America (3) GEOG 462 South America (3) GEOG 464 Europe (3) GEOG 465 Asia (3) GEOG 466 Africa (3) GEOG 467 Middle East (3) ■ Thematic Requirements 6 hours Choose two courses from: GEOG 350 Economic (3) GEOG 378 Food & Culture (3) GEOG 480 Urban (3) GEOG 481 Tourism (3) ■ Technique Requirements 10 hours GEOG 300 Research (3) GEOG 316 Foundations GIS (4) GEOG 391 Data Analysis (3) Program Total 36 hours	Cultural Geography ■ Foundation Requirements 14 hours GEOG 100 or GEOL 102 Physical (3) GEOG 110 World Regional Geog. (3) GEOG 330 Intro to Cultural (3) GEOG 430 Topics in Cultural (3) GEOG 475 or 495 Practicum or Research (1) GEOG 499 Professional Development (1) ■ Regional Requirements 6 hours Choose two courses from: GEOG 200 Latin America (3) GEOG 360 North America (3) GEOG 451 Kentucky (3) GEOG 454 Middle America (3) GEOG 462 South America (3) GEOG 464 Europe (3) GEOG 465 Asia (3) GEOG 466 Africa (3) GEOG 467 Middle East (3) ■ Thematic Requirements 6 hours Choose two courses from: GEOG 350 Economic (3) GEOG 378 Food & Culture (3) GEOG 480 Urban (3) GEOG 481 Tourism (3) ■ Technique Requirements 10 hours GEOG 300 Research (3) GEOG 316 Foundations GIS (4) GEOG 391 Data Analysis (3) Program Total 36 hours

Additional requirement: MATH 118 (or MATH 116 and MATH 117)	• Additional requirement: MATH 118 (or MATH 116 and MATH 117)
Environment and Sustainable Development ■ Foundation Requirements 13 hours GEOG 100 or GEOL 102 Physical (3) GEOG 110 World Regional Geog. (3) GEOG 280 Environment (3) GEOG 475 or 495 Practicum or Research (3) GEOG 499 Professional Development (1) ■ Thematic Requirements 9 hours GEOG 328 Biogeography (3) GEOG 471 Natural Resources (3) GEOG 474 Env. Planning (3) ■ Technique Requirements 10 hours GEOG 300 Research (3) GEOG 316 Foundations GIS (4) GEOG 391 Data Analysis (3) ■ General Electives 4 hours GEOG 208, 209, 310, 317, 350, 380 Sustainable Development, 414, 417, 419, 444, 452, 455, 487, GEOL 415 Program Total 36 hours Additional requirements: MATH 118 (or MATH 116 and MATH 117) and one Ethics course: PHIL 320 or GEOG 444	**Environmental Planning and Resource Management** ■ Foundation Requirements 13 hours GEOG 100 or GEOL 102 Physical (3) GEOG 110 World Regional Geog. (3) GEOG 280 Environment (3) GEOG 475 or 495 Practicum or Research (3) GEOG 499 Professional Development (1) ■ Thematic Requirements 9 hours GEOG 328 Biogeography (3) GEOG 471 Natural Resources (3) GEOG 474 Env. Planning (3) ■ Technique Requirements 10 hours GEOG 300 Research (3) GEOG 316 Foundations GIS (4) GEOG 391 Data Analysis (3) ■ General Electives 4 hours GEOG 208, 209, 310, 317, 350, 380, 414, 417, 419, 444, 452, 455, **459, 461,** 487, GEOL 415 Program Total 36 hours Additional requirements: MATH 118 (or MATH 116 and MATH 117) and one Ethics course: PHIL 320 or GEOG 444
Land, Weather, and Climate ■ Foundation Requirements 13 hours GEOG 100 or GEOL 102 or GEOL 111 Physical/Earth (3) GEOG 110 World Regional Geog. (3) GEOG 121 Meteorology (3) GEOG 475 or 495 Practicum or Research (3) GEOG 499 Professional Development (1) ■ Thematic Requirements 7 hours GEOG 422 Physical Climatology (4) GEOG 424 or 426Weather (3) ■ Technique Requirements 10 hours GEOG 300 Research (3) GEOG 316 Foundations GIS (4) GEOG 391 Data Analysis (3) ■ General Electives 6 hours GEOG 122, 222, 310, 325, 328, 414, 420, 424 or 426, 482, 455, 471, GEOL 311, 325 Program Total 36 hours Additional Requirements: MATH 118 (or	Land, Weather, and Climate ■ Foundation Requirements 13 hours GEOG 100 or GEOL 102 or GEOL 111 Physical/Earth (3) GEOG 110 World Regional Geog. (3) GEOG 121 Meteorology (3) GEOG 475 or 495 Practicum or Research (3) GEOG 499 Professional Development (1) ■ Thematic Requirements 7 hours GEOG 322 Global Climate Systems (4**)** GEOG 424 or 426Weather (3) ■ Technique Requirements 10 hours GEOG 300 Research (3) GEOG 316 Foundations GIS (4) GEOG 391 Data Analysis (3) ■ General Electives 6 hours GEOG 122, 222, 310, 325, 328, 414, 420, 424 or 426, 455, **459, 461**, 471, 482, GEOL 311, 325 Program Total 36 hours

116/117), PHYS 201	Additional Requirements: MATH 118 (or 116/117), PHYS 201
Planning and GIS ■ Foundation Requirements 13 hours GEOG 100 or GEOL 102 Physical (3) GEOG 110 World Regional Geog. (3) GEOG 240 Planning (3) GEOG 475 or 495 Practicum or Research (3) GEOG 499 Professional Development (1) ■ Thematic Requirements 9 hours GEOG 317 GIS (3) GEOG 474 Env. Planning (3) GEOG 484 Advanced Plan (3) ■ Technique Requirements 10 hours GEOG 300 Research (3) GEOG 316 Foundations GIS (4) GEOG 391 Data Analysis (3) ■ General Electives 4 hours GEOG 350, 360, 414, 416, 417, 419, 423, 451, 477, 480, 487, 488, 497 Program Total 36 hours Additional Requirements: MATH 118 (or MATH 116 and 117) AMS 163, CIS/CS 226 or CS 230	Planning and GIS ■ Foundation Requirements 13 hours GEOG 100 or GEOL 102 Physical (3) GEOG 110 World Regional Geog. (3) GEOG 240 Planning (3) GEOG 475 or 495 Practicum or Research (3) GEOG 499 Professional Development (1) ■ Thematic Requirements 10 hours GEOG 317 GIS (4) GEOG 474 Env. Planning (3) GEOG 484 Advanced Plan (3) ■ Technique Requirements 10 hours GEOG 300 Research (3) GEOG 316 Foundations GIS (4) GEOG 391 Data Analysis (3) ■ General Electives 3 hours GEOG 350, 360, 414, 416, 417, 419, 423, 451, 477, 480, 487, 488, 497 Program Total 36 hours Additional Requirements: MATH 118 (or MATH 116 and 117) AMS 163, CIS/CS 226 or CS 230
Geography Honors • Program Requirements 30 hours GEOG 100 (Honors), 110 (Honors), 300, 316, 391, HONS 300, HONS 301, HEEC courses (10 hours), 499 • Program Electives 6 hours HONS 403 Thesis for 6 hours, or 475 or 495 • Program Total 36 hours Additional requirements: MATH 118 (or MATH 116 and MATH 117) and one Ethics course: PHIL 320 or GEOG 440	Geography Honors • Program Requirements 30 hours GEOG 100 (Honors), 110 (Honors), 300, 316, 391, HONS 300, HONS 301, HEEC courses (10 hours), 499 • Program Electives 6 hours HONS 403 Thesis for 6 hours, or 475 or 495 • Program Total 36 hours Additional requirements: MATH 118 (or MATH 116 and MATH 117) and one Ethics course: PHIL 320 or GEOG 440

4. Rationale for the proposed program changes: WKU currently does not have a physical geography program focused on the special issues involved in karst landscapes. The proposed concentration will be unique in the U.S. It will position the department to attract a new group of students to WKU and to take advantage of our unique location near Mammoth Cave and our unique group of karst specialty scientists. This new concentration will promote research, teaching, and outreach synergies throughout the university and across the country. Additionally, it will balance the geography major and provide coursework that has been requested by many students, alumni, and other regional stakeholders. This new concentration will be closely linked to the Hoffman Environmental Research Institute and the Center for Cave and Karst Studies.

The existing environmental concentration is being renamed to distinguish it from the new Sustainability Minor. The new electives are being added to integrate the new karst geoscience courses into the program as a whole.

5. Proposed term for implementation and special provisions (if applicable): Fall 2011

6. Dates of prior committee approvals:

Department of Geography and Geology	_____2/23/2011_____
Ogden Curriculum Committee	_____3/3/2011_____
Undergraduate Curriculum Committee	_____3/24/2011_____
University Senate	_____

Attachment: Program Inventory Form

Proposal Date: January 13, 2011

Ogden College of Science and Engineering
Department of Mathematics and Computer Science
Proposal to Revise A Program
(Action Item)

Contact Person: Nezam Iraniparast, nezam.iraniparast@wku.edu, Phone: 56218

1. Identification of program:

1.1 Current program reference number: 728 and 528
1.2 Current program title: Major in Mathematics
1.3 Credit hours: 34 hours (728); 48 hours (528)

2. Identification of the proposed program changes:

- Increase the number of required credit hours for the certifiable major 728 from 34 to 36.
- Increase the number of required credit hours for the non-certifiable major 728 from 34 to 39.
- Increase the number of required credit hours for the extended major 528 from 48 to 51.
- Change the intended goal of non-certifiable major 728.
- Specify the intended goal of non-certifiable major 528.
- Require 12 credit hours of advisor approved supporting courses for non-certifiable major 728.
- Require Elementary Logic, PHIL 215 or Digital Circuits, EE 180 for all 728 and 528 majors.
- Delete the list of sequences for the non-certifiable majors 728 and 528.
- Create lists of limited electives and less limited electives to replace sequences in the non-certifiable majors 728 and 528.
- Offer choices of specific areas in mathematics for non-certifiable major 528.
- Add MATH 431 to the list of required courses for the non-certifiable math major 528.
- Add MATH 370 to the list of elective courses for the non-certifiable math majors 728 and 528.
- Add MATH 473 to the list of elective courses for the non-certifiable math majors 728 and 528.
- Replace CS 180 or 230 with CS 180 or 170 for option 2 major.

- Require that for each mathematics course, all mathematics courses listed as prerequisite for that course must have been completed with a grade of C or better.

3. Detailed program description:

Current Program	**Proposed Program**
Major in Mathematics A major in mathematics provides a Bachelor of Arts degree and requires either a minimum of **3**4 semester hours for a general major with a minor or second major (reference number 728) or a minimum of **48** semester hours for an extended major (reference number 528). Students who wish to declare a 728 or 528 mathematics major will initially be designated as "seeking admission" until the following requirements have been satisfied: • Complete MATH 136, MATH 137, and MATH 307 or MATH 310, with a grade of C or better in each course. • Have an overall GPA of at least 2.4 in mathematics program courses (MATH 136 and above) completed prior to admission**.** The general major (728) offers two options: (1) **Major for Employment in Industry and/or Graduate Studies in Mathematics**; (2) Major Certifiable for Teaching Secondary Level Mathematics. The extended major (528) offers only the first option. Option 1 students are required to complete both CS 180 and CS 181. Option 2 students are required to complete either CS 180 or **230**. <u>Option 1</u>: **Major for Employment in Industry and/or Graduate Studies in Mathematics** (A) General Major (728): The student must complete a minimum of **34** hours of mathematics with a minor or second major giving a total of at least **54** hours (**48** unduplicated) with the following requirements: 1. MATH 136, 137, 237, 307, 310, 317, 337, 498.	Major in Mathematics A major in mathematics provides a Bachelor of Arts degree and requires either a minimum of **36-39** semester hours for a general major with a minor or second major (reference number 728) or a minimum of **51** semester hours for an extended major (reference number 528). **Note: All mathematics courses listed as prerequisites for other courses must have been completed with a grade of C or better**. Students who wish to declare a 728 or 528 mathematics major will initially be designated as "seeking admission" until the following requirements have been satisfied: • Complete MATH 136, MATH 137, and MATH 307 or MATH 310, with a grade of C or better in each course. • Have an overall GPA of at least 2.4 in mathematics program courses (MATH 136 and above) completed prior to admission**.** The general major (728) offers two options: (1) **Non-certifiable Major in Mathematics**; (2) Major Certifiable for Teaching Secondary Level Mathematics. The extended major (528) offers only the first option. Option 1 students are required to complete both CS 180 and CS 181. Option 2 students are required to complete either **CS 170** or 180. <u>Option 1</u>: **Non-certifiable Major in Mathematics**. (A) General Major (728): **To prepare for employment in industry**, the student must complete a minimum of **39** hours of mathematics with a minor or second major, giving a total of at least **59** hours (**53** unduplicated) with the following

2. **At least one of the sequences:** MATH 317-417; 331-435; 337-431; 337-450; 382-482; 405-406. 3. **At least 6 hours of 400-level mathematics other than** MATH 475. **Other acceptable courses for the general major are** MATH 275 (up to 3 hours), 305, 315, 323, 331, 382, 398 (up to 3 hours), 405, 406, 415, 417, 423, 431, 432, 435, 439, 450, 470, 475 (up to 6 hours), 482, and STAT 301. (B) Extended Major (528): The student must complete a minimum of **48** hours of mathematics with the following requirements: 1. MATH 136, 137, 237, 307, 310, 317, 337, 498. **2. At least one of the sequences: MATH 317-417; 331-435; 337-431; 337-450; 382-482; 405-406.** 3. At least 12 hours of 400-level mathematics. **Other acceptable courses for the extended major are** MATH 275 (up to 3 hours), 305, 315, 323, 331, 382, 398 (up to 3 hours), 405, 406, 409, 415, 417, 423, 431, 432, 435, 439, 450, 470, 475 (up to 6 hours), 482, and STAT 301. (B) Extended Major (528): The student must complete a minimum of **48** hours of mathematics with the following requirements: 1. MATH 136, 137, 237, 307, 310, 317, 337, 498. **2. At least one of the sequences:** MATH 317-417; 331-435; 337-431; 337-450; 382-482; 405-406. 3. **At least 12 hours of 400-level mathematics**. **Other acceptable courses for the extended major are** MATH 275 (up to 3 hours), 305, 315, 323, 331, 382, 398 (up to 3 hours), 405, 406, 409, 415, 417, 423, 431, 432, 435, 439, 450, 470, 475 (up to 6 hours), 482, and STAT 301.	requirements: 1. MATH 136, 137, 237, 307, 310, 317, 337, 498. 2. **Two courses from** MATH 405, 406, 415, 417, 423, 431, 432, 435, 439, 450, 470, **473**, 482. 3. **Six elective hours from** MATH 275 (up to 3 hours), STAT 301, MATH 305, 315, 323, 331, **370**, 382, 398 (up to 3 hours), 405, 406, 415, 417, 423, 432, 435, 439, 450, 470, 475 (up to 6 hours), 482. **4. Students may take certain 500-level mathematics courses for undergraduate credit with the approval of the Dept. Head in place of courses listed in items 2 or 3.** **5. In addition, 12 credit hours of supporting courses from the Ogden College of Science and Engineering or Gordon Ford College of Business (courses such as mathematics, statistics, sciences, engineering, economics, finance and accounting) are required. These courses must be approved by the mathematics and computer science department head. These hours will not count toward a first minor nor usually toward a second major.** **6. Also required is Elementary Logic PHIL 215, or Circuit Design, EE 180.** **7. Note: This major is not intended to prepare students adequately for graduate mathematics. Students intending to seek a graduate degree should pursue major 528.** (B) Extended Major (528): **To prepare for graduate study in mathematics**, the student must complete a minimum of **51** hours of mathematics with the following requirements: 1. MATH 136, 137, 237, 307, 310, 317, 337, **431**, 498. **2. Emphasis in one of the following areas B1, B2 or B3.** **B1. Fundamentals of Analysis and Discrete Mathematics.**

Option 2: Major Certifiable for Teaching Secondary Level Mathematics (reference number 728): The student must complete a minimum of **34** hours of mathematics with a second major in Science and Mathematics Education (SMED). The following courses are requirements: 1. MATH 136, 137, 237, 304, 307, 310, 317, 323, 498; STAT 301. Before the professional semester, the student must complete each of these courses with a grade of "C" or better and achieve a GPA of at least 2.5 in mathematics. 1. **At least** 3 hours of 400-level mathematics from the following list: MATH 405, 406, 409, 415, 417, 421, 423, 431**,** 432, 435, 439, 450, 470, 482.	i. MATH 417, 439, 450. ii. **Two courses from** MATH 315, 323, 415, 423, 432, **473**. iii. **Six additional elective hours from** MATH 275 (up to 3 hours), STAT 301, MATH 305, 315, 323, 331, **370**, 382, 398 (up to 3 hours), 405, 406, 409, 415, 423, 432, 435, 470, **473**, 475 (up to 6 hours), 482. **B2. Fundamentals of Applied Mathematics.** i. MATH 331, **370**, 382, 405. ii. **Two courses from** MATH 305, 406, 435, 470, 482. iii. **Three credit hours from** MATH 275, STAT 301, MATH 305, 315, 323, 398, 406, 409, 415, 417, 423, 432, 435, 439, 450, 470, **473**, 475, 482. **B3. Fundamentals of Mathematical Studies.** i. MATH 450. ii. **Two courses from** MATH 405, 406, 409, 415, 417, 423, 432, 435, 439, 470, **473**, 482. **iii. Twelve additional electives from** MATH 275 (up to 3 hours), STAT 301, MATH 305, 315, 323, 331, **370**, 382, 398 (up to 3 hours), 405, 406, 409, 415, 423, 432, 435, 470, **473**, 475 (up to 6 hours), 482. **3. Students may take certain 500-level mathematics courses for undergraduate credit in place of courses listed in items B1i, B1ii, B2i, B2ii, B3i, or B3ii with the approval of the mathematics and computer science Dept. Head. No minor or a second major for the extended major is required.** Option 2: Major Certifiable for Teaching Secondary Level Mathematics (reference number 728): The student must complete a minimum of **36** hours of mathematics with a second major in Science and Mathematics Education (SMED). The following courses are requirements: 1. MATH 136, 137, 237, 304, 307,

	310, 317, 323, 498; STAT 301. Before the professional semester, the student must complete each of these courses with a grade of "C" or better and achieve a GPA of at least 2.5 in mathematics. 2. Three hours of 400-level mathematics from the following list: MATH 405, 406, 409, 415, 417, 421, 423, 435, 439, 450, 470, 431432, 482. **3. Also required is Elementary Logic PHIL 215, or Circuit Design EE 180.**

4. Rationale for the proposed program changes:

- When we decreased the number of hours in the calculus sequence, we created a situation in which students could complete the major by taking MATH 398 for one hour of credit. We believe students would benefit more by enrolling in a one 3-credit upper division mathematics course. Hence, we propose to increase the number of credit hours in the certifiable major (728) by 2 hours.

- Two of the 5 extra credit hours in the non-certifiable major 728 are added for the same reason as above. The other 3 credit hours are added to this major to increase the number of elective courses so the students can explore other areas of mathematics.

- We added 3 extra hours to strengthen the program for our students pursuing a graduate degree, as is the intended goal of this major.

- Based on our past experience, the current non-certifiable major 728 does not adequately prepare our students for graduate work or employment in industry. However, by requiring supporting course work the students in this major should be better equipped to start a career in industry.

- Based on our experience the extended major 528 does lay a firm foundation for graduate studies in mathematics.

- The added 12 hours of supporting course work should enable our students to launch a more successful bid for work in industry. This is also done in other institutions in our close proximity (e.g., Murray State and Middle Tennessee State).

- Based on our experience the students will better understand proofs in mathematics if they have some background in the principles of formal logical argument.

- The intention of the two types of electives is to build a mathematical foundation and still allow flexibility in the student's choices.

- Since the intended goal of major 528 is for graduate school preparation, students will benefit from an early exposure to specific areas in mathematics.

- MATH 431 (Intermediate Analysis) together with the new course MATH 337 (Elements of Real Analysis) will provide our students in major 528 with a good foundation necessary for graduate work.

- MATH 370 (Applied Techniques in Mathematics) is a new course with enhanced topics to serve both engineering students and mathematics majors and minors. We believe it is a worthwhile course to include in the list of electives.

- The newly created course MATH 473 (Introduction to Graph Theory) contains an attractive list of topics that will be beneficial to the mathematical experience of our majors.

- Based on our past experience, students with grades C or better in prerequisite courses perform more successfully in subsequent courses.

5. Proposed term for implementation and special provisions: Fall 2011.

6. Dates of prior committee approvals:

Mathematics and computer Science:	__January 21, 2011__
OCSE Curriculum Committee	__March 3, 2011____
Professional Education Council	__March 16, 2011___
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Program Inventory Form

Proposal Date: 11/05/2010

Ogden College of Science and Engineering
Department of Mathematics and Computer Science
Proposal to Revise a Program
(Action Item)

Contact Person: Zhonghang Xia, zhonghang.xia@wku.edu, 745-6459

1. Identification of program:

1.1 Current program reference number: 341
1.2 Current program title: Minor in Computer Science
1.3 Credit hours: 18

2. Identification of the proposed program changes:

- Change course number: CS 338 → CS 280.
- Add CS 251 to list of required CS courses.
- Add PHIL 215 to the general requirements.
- Change required number of CS hours from 18 to 23.
- Require all elective courses to be at 300 level or above.

3. Detailed program description:

Current requirements for a Minor in Computer Science	Proposed requirements for a Minor in Computer Science
General: 1) **18** hours of Computer Science are required 2) MATH 119, 122, or 136 is required 3) All CS courses counting towards the CS program minor must be completed with a C or better.	General: 1) **23** hours of Computer Science are required 2) MATH 119, 122, or 136, and **PHIL 215** are required 3) All CS courses counting towards the CS program minor must be completed with a C or better.
Required CS courses: Completion of the following 11 credit hours : CS 180, 181, and **338**	Required CS courses: Completion of the following 11 credit hours: CS 180, 181, and **251 or 280**
Completion of an additional 7 hours of CS electives at the **200** level or above including **6** hours at the 300 level or higher.	Electives: Completion of an additional **12** hours of CS courses at the **300** level or higher.

4. Rationale for the proposed program change:

- The change in course number reflects a previously approved curriculum change in the Mathematics and Computer Science Department.
- Adding CS 251 to the required courses will provide students more flexibility for their course selection.
- Elementary logic provides a good foundation for CS courses.
- The increase in the number of required CS courses at the 300 level will result in a stronger minor for students.

5. Proposed term for implementation and special provisions (if applicable): Fall 2011

6. Dates of prior committee approvals:

Mathematics and Computer Science _____1/21/2011_____

Ogden College Curriculum Committee _____2/3/2011_____

University Curriculum Committee _____

University Senate _____

Attachment: Program Inventory Form

Proposal Date:2/4/2010

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

Contact Person: Kevin Williams, Kevin.williams@wku.edu, 5-8899

1. Identification of program:

1.1 Program title: Minor in Nutritional and Food Chemistry
1.2 Required hours in minor program: 18
1.3 Special information: N/A
1.4 Catalog description: The minor in nutritional and food chemistry is intended for students who wish to understand nutritional principles from a molecular level. The core courses provide a background in fundamental principles of general chemistry, organic chemistry, and biochemistry. Students can select appropriate electives from a variety of departments as appropriate.

2. Rationale:

2.1 Reason for developing the proposed minor program: We propose addition of a minor for students who are interested in the nutritional and food aspects of chemistry. The growth of the food science area in Kentucky and at WKU may lead to an increased interest in food and/or nutritional chemistry by students from departments other than chemistry, such as Agriculture or Architectural and Manufacturing Sciences. This minor will be established with existing courses in the chemistry department as well as electives from existing courses in other departments to focus on nutritional or food science aspects according to their interests.
2.2 Projected enrollment in the proposed minor program: Approximately 5-10 students per year initially; typically 60-70 students enroll in CHEM 107 each year, and this estimate assumes that ~10% will choose the minor.
2.3 Relationship of the proposed minor program to other programs now offered by the department: The department offers a major and minor in chemistry but neither in nutritional and food chemistry. There will be no overlap between the standard chemistry minor and the proposed minor.
2.4 Relationship of the proposed minor program to other university programs: The College of Health and Human Services offers a Nutrition and Dietetics major; the CHEM 105/106/107/108 sequence is required as part of that major, though these students do not need a minor and thus will likely not participate. Architecture and Manufacturing Sciences offers a major in Advanced Manufacturing with a Food Automation and Manufacturing concentration; these students may be interested in the nutritional and food chemistry minor.
2.5 Similar minor programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions): A nutritional chemistry minor would be unique in the state and amongst our benchmarks to our knowledge. The University of Kentucky does have an undergraduate degree in Food Science through their College of Agriculture.

2.6 Relationship of the proposed minor program to the university mission and objectives: The food processing industry is and will continue to be an important economic driver in the state of Kentucky. WKU has partnered with Owensboro to establish lab space at the Centre for Business and Research for food science applied research. Given the university's focus on preparing students for engaged and applied research opportunities and serving our constituencies, the minor should be attractive to students interested in this growth area.

3. Objectives of the proposed minor: Upon completion of the minor students will:

- Understand the molecular aspects of food and nutrition
- Master the fundamentals of general chemistry, organic chemistry and biochemistry that are relevant to food and nutrition
- Gain specific mastery of agricultural, manufacturing or nutritional aspects of chemistry

4. Curriculum: The minor in nutritional chemistry will require a minimum of 18 hours, including 12 hours of required courses and at least 6 hours of elective courses to be selected in consultation with an advisor.

Required courses: The following 12 hours of courses are required:
CHEM 105: Fundamentals of General Chemistry, 3 hours
CHEM 106: Fundamentals of General Chemistry Laboratory, 1 hour
CHEM 107: Fundamentals of Organic Chemistry, 3 hours
CHEM 108: Fundamentals of Organic Chemistry Laboratory, 1 hour
CHEM 304: Biochemistry for the Health Sciences, 4 hours

Electives: Students must choose at least 6 hours from the following electives:

CHEM 299: Introduction to Chemistry Research, 1-3 hours
CHEM 314: Introduction to Organic Chemistry, 5 hours
CFS 111: Human Nutrition, 3 hours
CFS 261: Advanced Nutrition, 3 hours
AMS 301: Science of Food Processing, 3 hours
AMS 303: Food Laws and Regulations, 3 hours
AMS 352: Food Processing: Unit Operations, 3 hours
AMS 381: Food Quality Assurance, 3 hours
AMS 443: Food Packaging, 3 hours
AMS 462: Commodity Food Processing, 3 hours
BIOL 207: Microbiology, 3 hours
BIOL 208: Microbiology laboratory, 1 hour
AGEC 468: World Food Development, 3 hours

At least half of the credits must be at the upper division level.

5. Budget implications: No additional courses are required for this minor. We do not anticipate the enrollment in any classes would increase to a level requiring additional sections, and, thus, there should be no budget implications.

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Chemistry Department:	_February 18, 2011__
OCSE Curriculum Committee	_March 3, 2011_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Program Inventory Form

Proposal Date: 3/29/2010

Ogden College of Science and Engineering
Department of Mathematics and Computer Science
Proposal to Create a New Certificate Program
(Action Item)

Contact Persons:	Melanie Autin	melanie.autin@wku.edu	745-6171
	Jonathan Quiton	jonathan.quiton@wku.edu	745-2441

1. Identification of program:

1.1 Program title:
Certificate in Data Analysis using SAS®

1.2 Required hours in certificate program:
15 hours

1.3 Special information:
This certificate program is administered by the Mathematics Division of the Department of Mathematics and Computer Science in partnership with the SAS Institute and is intended for students who are interested in industry-based career opportunities in statistics and related fields.

1.4 Catalog description:
The Certificate in Data Analysis using SAS requires a minimum of 15 semester hours. This certificate is designed for a student seeking a career as a statistical programmer/analyst/consultant in a knowledge-based industry or in a research institution.

To be eligible for the program, the student must have completed MATH 136 (formerly MATH 126) or MATH 142 (or equivalent) with a grade of C or better. The student pursuing a Certificate in Data Analysis using SAS must complete a minimum of 12 credit hours of core statistics courses as follows:

STAT 301, 330, 401, 402 (12 hours)

In addition, this student is required to take at least 3 credit hours of courses using SAS, selected from the following:

- Any 300-level or higher STAT course using SAS, other than STAT 301, 330, 401, and 402
- MATH 498 (Undergraduate Senior Project). Students are required to provide an electronic copy of their paper to the Statistics Education Committee of the Department of Mathematics and Computer Science to verify the use of SAS software
- Any 300-level or higher course using SAS in another department, with prior approval from the Statistics Education Committee of the Department of Mathematics and Computer Science

2. Rationale:

2.1 Reason for developing the proposed certificate program:

The mandate for a certificate program in data analysis using SAS comes from an immediate need for students from many disciplines to learn and use statistical methods as implemented in a flexible and powerful computing platform such as SAS. SAS is one of the leading computing software packages used in various disciplines such as business, economics, finance, law, medicine, biology, meteorology, chemistry, physics, engineering, sports, education, sociology, psychology, history, and high-performance computing. With the vast amounts of data that are collected and produced on a daily basis, the demand for people skilled in analytical jobs using statistical methods and SAS is increasing. This certificate will expose students to many important topics in data analysis and SAS and provide them with useful and marketable skills. By design, the certificate program is intended for graduate, undergraduate, and non-degree seeking students as long as they meet the eligibility requirement.

2.2 Projected enrollment in the proposed certificate program:

This certificate program anticipates enrolling at least 10 students in the initial year and is expected to grow.

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

This program is the first certificate program in the Mathematics Division. It is possible that a degree-seeking student will get both a minor in applied statistics and the Certificate in Data Analysis using SAS if he/she meets the completion requirements of both programs.

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

This program is unique from other programs at the university.

2.5 Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):

Kennesaw State University is the only university that currently offers a certificate in data analysis using SAS. Seven universities, including the University of Louisville, have a joint certificate program in data mining with SAS, three of which are at the graduate level.

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

The proposed certificate program is consistent with the objectives of the university. The program prepares students to be productive, engaged leaders in a global society and will attract talented students both regionally and nationally.

3. Objectives of the proposed certificate:

Upon completion of the certificate, students should be able to:

- design and implement commonly used experimental and sampling strategies;
- encode and manage SAS databases for analysis and report generation,

- statistically analyze data using SAS from a wide variety of disciplines;
- interpret SAS output and generate SAS reports understandable to target clients.

4. Curriculum:

Eligibility Requirement

- MATH 136 or MATH 142 or equivalent with a grade of C or better (4-5 credit hours)

Core Courses (12 hours)

- STAT 301, 330, 401 and 402

Elective Courses (3 hours)

This student is required to take at least 3 additional credit hours of courses using SAS, selected from the following:

- Any 300-level or higher STAT course using SAS, other than STAT 301, 330, 401, and 402
- MATH 498 (Undergraduate Senior Project). Students are required to provide an electronic copy of their paper to the Statistics Education Committee of the Department of Mathematics and Computer Science to verify the use of SAS software.
- Any 300-level or higher course using SAS in another department, with prior approval from the Statistics Education Committee of the Department of Mathematics and Computer Science

5. Budget implications:

The proposed certificate program in statistical methods using SAS will increase enrollment in some of the required courses in the program. The Department of Mathematics and Computer Science has hired three tenure-track assistant professors in statistics and hopes to hire more in the future for the purpose of establishing a major in statistics.

6. Proposed term for implementation:

Fall 2011

7. Dates of prior committee approvals:

Department of Mathematics and Computer Science 4-30-2010

OCSE Curriculum Committee 3-3-2011

Undergraduate Curriculum Committee _____

University Senate _____

Attachment: Program Inventory Form

Proposal Date: January 28, 2010

University College
Women's Studies Program
Proposal to Revise Course Title
(Action Item)

Contact Person: Jane Olmsted, jane.olmsted@wku.edu, 745-5787

1. Identification of course:

1.41 Current course prefix (subject area) and number: GWS 200
1.42 Course title: Introduction to Women's Studies
1.43 Credit hours: 3

2. Proposed course title: Introduction to Gender & Women's Studies

3. Proposed abbreviated course title: Intro Women Gender Studies
(max. of 30 characters including spaces)

4. Rationale for the revision of course title: The Women's Studies Program is revising its name to Women & Gender Studies Program. All courses that specify "women's studies" in the title should be corrected to match the new program name, with the inclusion of "and gender."

5. Proposed term for implementation: 201210

6. Dates of prior committee approvals:

Women's Studies Program:	__January 28, 2011___
University College Curriculum Committee	___February 28, 2011___
Undergraduate Curriculum Committee	___March 24, 2011____
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: January 28, 2010

University College
Women's Studies Program
Proposal to Revise Course Title
(Action Item)

Contact Person: Jane Olmsted, jane.olmsted@wku.edu, 745-5787

1. Identification of course:
- 1.1 Current course prefix (subject area) and number: GWS 421
- 1.2 Course title: Women and Science
- 1.3 Credit hours: 3

2. Proposed course title: Women, Gender, and Science

3. Proposed abbreviated course title: Women, Gender, and Science
(max. of 30 characters including spaces)

4. Rationale for the revision of course title: The Women's Studies Program is revising its name to Women & Gender Studies Program. All courses that specify "women's studies" in the title should be corrected to match the new program name, with the inclusion of "and gender." In this case, some of the significant theories and studies address gender, thus opening up the options for course content, while retaining the emphasis on women.

5. Proposed term for implementation: 201210

6. Dates of prior committee approvals:

Women's Studies Program:	January 28, 2011
University College Curriculum Committee	February 28, 2011
Undergraduate Curriculum Committee	March 24, 2011
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: January 28, 2010

University College
Women's Studies Program
Proposal to Revise Course Title
(Action Item)

Contact Person: Jane Olmsted, jane.olmsted@wku.edu, 745-5787

1. Identification of course:
- 1.1 Current course prefix (subject area) and number: GWS 470
- 1.2 Course title: Special Topics in Women's Studies
- 1.3 Credit hours: 3

2. Proposed course title: Special Topics in Gender and Women's Studies

3. Proposed abbreviated course title: Spec Topics Women, Gender
(max. of 30 characters including spaces)

4. Rationale for the revision of course title: The Women's Studies Program is revising its name to Gender & Women's Studies Program. All courses that specify "women's studies" in the title should be corrected to match the new program name, with the inclusion of "and gender."

5. Proposed term for implementation: 201210

6. Dates of prior committee approvals:

Women's Studies Program:	January 28, 2011
University College Curriculum Committee	February 28, 2011
Undergraduate Curriculum Committee	March 24, 2011
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: January 28, 2010

University College
Women's Studies Program
Proposal to Revise Course Title
(Action Item)

Contact Person: Jane Olmsted, jane.olmsted@wku.edu, 745-5787

1. Identification of course:
- 1.1 Current course prefix (subject area) and number: GWS 491
- 1.2 Course title: Practicum in Women's Studies
- 1.3 Credit hours: 3

2. Proposed course title: Practicum in Gender & Women's Studies

3. Proposed abbreviated course title: Practicum Gender & Women
(max. of 30 characters including spaces)

4. Rationale for the revision of course title: The Women's Studies Program is revising its name to Women & Gender Studies Program. All courses that specify "women's studies" in the title should be corrected to match the new program name, with the inclusion of "and gender."

5. Proposed term for implementation: 201210

6. Dates of prior committee approvals:

Women's Studies Program:	January 28, 2011
University College Curriculum Committee	February 28, 2011
Undergraduate Curriculum Committee	March 24, 2011
University Senate	_____

Attachment: Course Inventory Form

Proposal Date: January 28, 2011

University College
Women's Studies Program
Proposal to Revise A Program
(Action Item)

Contact Person: Jane Olmsted, jane.olmsted@wku.edu, 5787

1. Identification of program:

1.1 Current program reference number: 494
1.2 Current program title: Women's Studies Program
1.3 Credit hours: 21

2. Identification of the proposed program changes:

2.1 Change name to Minor in Gender & Women's Studies, change course prefix from WOMN to GWS, revise electives (deleted and added, based on availability).

3. Detailed program description:

Women's Studies Program	**Gender & Women's Studies Program**
Mission Statement: The Women's Studies Program broadens women's and men's knowledge of gender dynamics, globally and historically, with an emphasis on issues central to women's lives. Through an interdisciplinary classroom experience, community outreach, and special events, the Women's Studies Program advances understanding of the social and cultural institutions and practices that affect us.	Mission Statement: The **Gender & Women's Studies Program** broadens women's and men's knowledge of gender dynamics, globally and historically, with an emphasis on issues central to women's lives. Through an interdisciplinary classroom experience, community outreach, and special events, the **Gender & Women's Studies Program** advances understanding of the social and cultural institutions and practices that affect us.
Goals: • sharpen ability to critically analyze gender issues • encourage the practice of feminist scholarship • enhance intellectual and personal growth • foster an atmosphere in which diversity is valued • advocate ethical conduct, social justice, and responsible global citizenship	Goals: • sharpen ability to critically analyze gender issues • encourage the practice of feminist scholarship • enhance intellectual and personal growth • foster an atmosphere in which diversity **and sustainability are** valued • advocate ethical conduct, social justice, and responsible global citizenship.
The interdisciplinary minor (reference number 494) requires 21 semester hours. Course requirements include a 6-hour core composed of Introduction to Women's Studies (WOMN	The interdisciplinary minor (reference number 494) requires 21 semester hours. Course requirements include a 6-hour core composed

200) and Western Feminist Thought (WOMN 400) and fifteen hours of electives in the humanities, the sciences, or social sciences. Students select an area of concentration by taking nine hours in Category A or B; the remaining six are then taken from the other category. No more than six hours may be taken in any one department. Because new courses are added and occasionally dropped from the categories below, students should consult the latest information, on the website (www.wku.edu/womensstudies) or in the Women's Studies Center. Category A (Sciences and Social Sciences): CFS 495, PS 373, 374, PH 464, PSY 430, SOCL 355, 359, 362, 435, 466, SWRK 325, WOMN 421. Category B (Humanities): ANTH 343, ENG 360, 386, 387, 488, 496, 497, FLK 371, 480, HIST 446, 453, PHIL 201, RELS 333, WOMN 321. Category A or B: WOMN 375 Additional offerings include special topics courses in various disciplines.	of Introduction to Gender & Women's Studies (**GWS** 200) and Western Feminist Thought (**GWS** 400) and fifteen hours of electives in the humanities, the sciences, or social sciences. Students select an area of concentration by taking nine hours in Category A or B; the remaining six are then taken from the other category. No more than six hours may be taken in any one department. Because new courses are added and occasionally dropped from the categories below, students should consult the latest information, on the website (www.wku.edu/womensstudies) or in the Gender & Women's Studies Center. Category A (Sciences and Social Sciences): CFS 495, PS 373, 374, PH **365,** 464, PSY **345, 355,** 430, SOCL **353,** 355, 359, 362, 435, **446,** 466, ~~**SWRK 325,**~~ **GWS** 421. Category B (Humanities): ANTH 343; **DANC 360;** ENG 360, ~~386,~~ 387, ~~**488, 496,**~~ 497; FLK **280,** 371, 480; HIST **335, 420,** 446, 453; PHIL 201, **212;** RELS 333, **408; GWS** 321. Category A or B: **GWS** 375 Additional offerings include special topics courses in various disciplines.

4. Rationale for the proposed program changes:

The proposed name change reflects a growing trend among women's studies programs in the United States to include the categories of gender and/or sexuality in the titles of their programs. Over its forty years history as an interdisciplinary field of inquiry, women's studies scholarship has established gender and sexuality as fundamental categories of social and cultural analysis. Increasingly, feminist scholarship embraces the study of how ideas about gender and sexuality shape roles, identities, and social norms in a broad range of geopolitical and historical contexts. Consequently, the name "women's studies" is too narrow to describe the contemporary field. A changing theoretical landscape requires a broader naming of the field to include queer theory and critical theorizing on masculinity.

At WKU, the Women's Studies Program has incorporated the growing scholarship on gender and sexuality studies in its curricular offerings. Many of the distribution requirements for the minor in women's studies reference "gender" or "sexuality" in the title of the course: ANTH 343 "Anthropology of Gender," ENG 360 "Gay and Lesbian Literature," PHIL 212 "Philosophy and Gender Theory," and SOCL 355 "Sociology of Gender." In addition, the Women's Studies Program now offers WOMN 375 "American Masculinities" every spring semester. Changing the program name to Gender & Women's Studies conveys the important connotation that identities

are not fixed and that marginal identities that do not fit neatly into majority categories are worthy of exploration and research. This name change will follow the trend in Kentucky as women's studies programs at University of Kentucky and at Berea College have recently made a similar change.

The changes in electives are based on whether or not the course continues to be appropriate as an elective for the minor. In some cases, faculty who originally proposed the course and included a significant component on women and/or gender have left WKU or are no longer offering the course. New courses have been added to reflect curricular revision across campus.

5. Proposed term for implementation and special provisions (if applicable): Spring 2012

6. Dates of prior committee approvals:

Women's Studies Program:	__January 28, 2011___
University College Curriculum Committee	___February 28, 2011___
Undergraduate Curriculum Committee	___March 24, 2011____
University Senate	_____

Attachment: Program Inventory Form

University College Commonwealth School
Business Division
Proposal to Revise Course Prerequisites/Corequisites
(Action Item)

Contact Persons: George Kontos, 780-2588, george.kontos@wku.edu
Aaron Peters, 780-2545, aaron.peters@wku.edu

1. Identification of course:
1.44 Course prefix (subject area) and number: INS 275C
1.45 Course title: Web Page Design
1.46 Credit hours: 3

2. Current prerequisites/corequisites/special requirements: Instructor's Permission

3. Proposed prerequisites/corequisites/special requirements: None

4. Rationale for the revision of prerequisites/corequisites/special requirements:
No prior knowledge is needed. The course begins with a brief introduction to computers.

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

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Business Division:	Sept 22, 2010
University College Curriculum Committee	Oct 25, 2010
University Curriculum Committee	_____
University Senate	_____

Attachment: Program Inventory Form

Proposal Date: September 22, 2010

University College Commonwealth School
Business Division
Proposal to Revise Course Prerequisites/Corequisites
(Action Item)

Contact Persons: George Kontos, 780-2588, george.kontos@wku.edu
Aaron Peters, 780-2545, aaron.peters@wku.edu

1. Identification of course:
1.1 Course prefix (subject area) and number: INS 285C
1.2 Course title: Advanced Software Applications
1.3 Credit hours: 3

2. Current prerequisites/corequisites/special requirements: INS 182C

3. Proposed prerequisites/corequisites/special requirements: None

4. Rationale for the revision of prerequisites/corequisites/special requirements:
No prior knowledge is needed. The course begins with a brief introduction to computers, operating systems, and software applications. The majority of students taking this course already have most of the INS 182C skills.

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

6. Proposed term for implementation: Fall 2011

7. Dates of prior committee approvals:

Business Division:	September 22, 2010
University College Curriculum Committee	October 25, 2010
University Curriculum Committee	_____
University Senate	_____

Attachment: Program Inventory Form

Current Courses vs. New Courses/Modules	WTTI 200: Water Supply and Wastewater Control	WTTI 210: Introduction to Water Treatment	WTTI 211: Introduction to Wastewater Treatment	WTTI 212: Water Distribution and Wastewater Collection	WTTI 220: Calculations & Hydraulics for Water	WTTI 221: Calculations & Hydraulics for Wastewater	WTTI 222: Water & Wastewater Instrumentation & Control	WTTI 226: Water Chemistry	WTTI 230: Advanced Water Treatment	WTTI 231: Advanced Wastewater Treatment	DW track	WW track
WTTI 201: Hydrology for Water Operations	0.5										0.5	0.5
WTTI 202: Drinking Water Sources, Quality & Standards	0.75										0.75	
WTTI 203: Introduction to Drinking Water Treatment	0.5										0.5	
WTTI 204: Introduction to Wastewater Treatment	0.5											0.5
WTTI 205: Introduction to Drinking Water Distribution	0.5										0.5	
WTTI 206: Introduction to Wastewater Collection	0.5											0.5
WTTI 213: Basic Drinking Water Treatment Processes		0.75									0.75	
WTTI 214: Coagulation and Flocculation Processes in Water Treatment		0.5	0.5								0.5	0.5
WTTI 215: Sedimentation Basins and Clarifiers in Water Treatment		0.5	0.5								0.5	0.5
WTTI 216: Water Filtration Processes		0.5	0.5								0.5	0.5
WTTI 217: Water Disinfection Processes		1	1								1	1
WTTI 223: Basic Calculations for Water Operations					1.25	1.25					1.25	1.25
WTTI 224: Basic Hydraulics for Water Operations					1	1					1	1
WTTI 225: Basic Hydraulic Concepts in Drinking Water Distribution Networks					0.5						0.5	
WTTI 227: Hydraulics of Open Channels for Wastewater Operations						0.5						0.5
WTTI 232: Wastewater Microbiology			0.5									0.5
WTTI 233: Natural Wastewater Treatment Systems			0.5									0.5
WTTI 234: Basic Infrastructure for Water Distribution & Wastewater Collection Systems				1							1	1
WTTI 235: Water Distribution System Components				0.75							0.75	
WTTI 236: Water Distribution System Operation and Maintenance				1.25							1.25	
WTTI 237: Wastewater Collection System Assessment and Repair				0.5								0.5
WTTI 238: Wastewater Collection Systems Management				0.5								0.5
WTTI 239: Stormwater Management for Operators				0.5								0.5
WTTI 240: Motors, Engines and Controls in Water Operations							0.5				0.5	0.5
WTTI 241: Introduction to Instrumentation and Control Systems in Water Operations							0.75				0.75	0.75
WTTI 242: Basic Electricity for Water Operators							0.5				0.5	0.5
WTTI 243: Flowmeters, Sensors & Process Measurements							0.5				0.5	0.5
WTTI 244: Automatic Process Control for Water Operations							0.75				0.75	0.75
WTTI 249: Basic Water Chemistry for Operators								1			1	1
WTTI 250: Drinking Water Sampling and Analysis								1			1	
WTTI 251: Wastewater Sampling and Analysis								1				1
WTTI 252: Water Operator Safety								0.75			0.75	0.75
WTTI 253: Wastewater Regulations								0.5				0.5
WTTI 254: Corrosion Control in Water Operations									0.5		0.5	
WTTI 255: Ion Exchange Processes in Water Treatment									0.5		0.5	
WTTI 256: Adsorption Processes in Water Treatment									0.5		0.5	
WTTI 257: Aeration Processes in Water Treatment									0.5		0.5	
WTTI 258: Membrane Processes in Water Treatment									0.5		0.5	
WTTI 259: Introduction to Residuals Management in Water Operations									0.5	0.5	0.5	0.5
WTTI 260: Suspended Growth Systems in Wastewater Operations										0.5		0.5
WTTI 261: Attached Growth Systems in Wastewater Operations										0.5		0.5
WTTI 262: Nutrient Removal Processes in Water Operations										1		1
WTTI 263: Industrial Wastewater Pretreatment Processes										0.5		0.5
WTTI 264: Wastewater Residuals Management										0.5		0.5
WTTI 265: Recordkeeping and Reporting for Water Operations									0.5	0.5	0.5	0.5
WTTI 266: Customer Service and Public Relations in Water Operations		0.5	0.5								0.5	0.5
TOTALS:	3.25	3.75	4	4.5	2.75	2.75	3	4.25	3.5	4	21	21