

Ogden College of Science and Engineering
 Western Kentucky University
 Office of the Dean
 745-6371

REPORT TO THE GRADUATE COUNCIL COMMITTEE

DATE: February 10, 2016
 FROM: Ogden College of Science and Engineering

Ogden College of Science and Engineering Committee Members: Dr. Fred DeGraves, Dr. John Khouryieh, Dr. Michael Smith, Dr. Eric Conte, Dr. Zhonghang Xia, Dr. Shane Palmquist, Dr. David Keeling, Dr. Ferhan Atici, Dr. Sanju Gupta, Dr. Sharon Mutter

Chair: Dr. Cathleen Webb

The Ogden College of Science and Engineering submits the following items for consideration at the September meeting:

Action	Proposal to Create a New Course BIOL 561, Human Parasitology Contact Person: Cheryl Davis, cheryl.davis@wku.edu , 5-6524
Action	Proposal to Revise a Course MATH 501 Introduction to Probability and Statistics I Contact Person: Hope Marchionda, hope.marchionda@wku.edu , 5-2961
Action	Proposal to Revise a Course MATH 503, Introduction to Analysis Contact Person: Hope Marchionda, hope.marchionda@wku.edu , 5-2961
Action	Proposal to Revise a Course MATH 504, Application of Technology to Problems in Mathematics Contact Person: Hope Marchionda, hope.marchionda@wku.edu , 5-2961
Action	Proposal to Revise a Course MATH 510, Intermediate Statistics Contact Person: Hope Marchionda, hope.marchionda@wku.edu , 5-2961
Action	Proposal to Revise a Course MATH 511, Algebra from an Advanced Perspective Contact Person: Hope Marchionda, hope.marchionda@wku.edu , 5-2961
Action	Proposal to Revise a Course MATH 512, Geometry from an Advanced Perspective Contact Person: Hope Marchionda, hope.marchionda@wku.edu , 5-2961
Action	Proposal to Revise a Course MATH 514, Application and Modeling for Teachers Contact Person: Hope Marchionda, hope.marchionda@wku.edu , 5-2961

Members Present: Dr. Fred DeGraves, Dr. John Khouryieh, Dr. Michael Smith, Dr. Zhonghang Xia, Dr. David Keeling, Dr. Ferhan Atici, Dr. Sanju Gupta,

Dr. Cathleen Webb, Chair

Shane Palmquist and Sharon Mutter gave Dr. Webb their proxy.

OLD BUSINESS

Keeling/DeGraves made a motion to approve the November 11 minutes. Motion approved.

NEW BUSINESS

No Consent Items

Action Items

Keeling/Smith made a motion to bundle and approve with suggested changes (change contact person on New Certificate Program to Linda Brown). Motion approved.

Proposal to Create a New Course BDAS 500

Proposal to Create a New Course BDAS 595

Proposal to Create a New Certificate Program, Brewing and Distilling Arts & Sciences

Keeling/Khouryieh made a motion to bundle and approve. Motion approved

Proposal to Revise a Course CHEM 412G

Proposal to Revise a Course CHEM 420G

Proposal to Revise a Course CHEM 425G

Proposal to Revise a Course CHEM 435G

Proposal to Revise a Course CHEM 440G

Proposal to Revise a Course CHEM 470G

Proposal to Revise a Course CHEM 476G

Proposal to Revise a Course CHEM 490G

Proposal to Revise a Course CHEM 491G

Proposal to Revise a Course CHEM 520

Proposal to Revise a Course CHEM 531

Proposal to Revise a Course CHEM 541

Proposal to Revise a Course CHEM 550

Proposal to Revise a Course CHEM 570

Proposal to Revise a Course CHEM 590

Proposal to Revise a Course CHEM 591

MINUTES – OCSE Graduate Curriculum Committee

January 13, 2016

Members Present: Dr. David Keeling, Dr. Sanju Gupta, Dr. Sharon Mutter,
Dr. Fred DeGraves, Dr. Michael Smith, Dr. John Khouryieh

Dr. Cathleen Webb, Chair

Keeling/Smith moved to have meeting via email. Motion approved.

Consent Agenda

GEOG 465G, Proposal to delete a Course

No Action Items

Proposal Date: February 4, 2016

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

Contact Person: Cheryl D. Davis, 270-745-6524, cheryl.davis@wku.edu

1. Identification of proposed course:

- 1.1 Course prefix (subject area) and number: BIOL 561
- 1.2 Course title: Human Parasitology
- 1.3 Abbreviated course title: Human Parasitology
(maximum of 30 characters or spaces)
- 1.4 Credit hours: 3 Variable credit (No)
- 1.5 Grade type: Standard Letter Grade
- 1.6 Prerequisites/corequisites: None
- 1.7 Course description: Course will emphasize the major parasitic pathogens and parasitic diseases of humans through lectures, case studies, digital images, and discussion of scientific literature. Intended for students participating in the master's program in biology.

2. Rationale:

- 2.1 Reason for developing the proposed course: This course will strengthen our course offerings in the fields of microbiology, parasitology, and human disease. The course will emphasize human parasitic pathogens, thus benefitting graduate students with medical and global health interests. Neglected parasitic and tropical diseases have become increasingly important global health issues in recent years as a consequence of our shrinking planet, the increased frequency and ease of global travel, changing patterns of immigration, and climatic change.
- 2.2 Projected enrollment in the proposed course: 10-12
- 2.3 Relationship of the proposed course to courses now offered by the department:
A general parasitology course (BIOL 460/460G) with a required 4 hour lab component is currently offered in the Department of Biology in alternate fall semesters. In addition, a graduate course entitled, Host-Parasite Associations (BIOL 523) is also offered in alternate years in the Department of Biology: in the Biol 523 course, host-parasite systems are explored with a major focus on ecological and evolutionary concepts. Neither of these courses have a specific focus on human parasites and parasitic diseases, and neither are available for online master's students in biology.
- 2.4 Relationship of the proposed course to courses offered in other departments: There are no parasitology courses offered in other departments at Western Kentucky University.
- 2.5 Relationship of the proposed course to courses offered in other institutions:
Many universities across the country offer graduate coursework in human parasitology, neglected tropical diseases, and in medical parasitology. A few examples include: University of Pennsylvania – CAMB 549: Parasitology and Parasitism; University of Georgia - MIBO/PBHL/IDIS/BHSI 8260: **Global Perspectives on Tropical and**

Emerging Infectious Diseases, CBIO 4500/6500, CBIO 4500L/6500L: Medical Parasitology

3. Discussion of proposed course:

- 3.1 Schedule type: L
- 3.2 Learning Outcomes: Upon successful completion of this course, students should be able to:
 - 1) Understand and appreciate the biological complexity of human parasitic pathogens and their impact on global health.
 - 2) Describe life cycles and transmission dynamics of the major human parasitic pathogens.
 - 3) Explain important principles and concepts pertaining to the morphology, physiology, immunology, pathology, and ecology of human parasites and parasitic diseases.
 - 4) Use their knowledge and experience to solve case studies relating to human parasitic diseases.
 - 5) Critically evaluate scientific literature in the field of parasitology.
- 3.3 Content outline:
 - Introduction to Human Parasitology
 - Kinetoplastid Parasites of Humans
 - Other Flagellated Parasites of Humans
 - Pathogenic Ameba of Humans
 - Apicomplexan Parasites of Humans
 - Digenetic Trematode Parasites of Humans
 - Cestode Parasites of Humans
 - Nematode Parasites of Humans
 - Ectoparasites of Humans
- 3.4 Student expectations and requirements:
 - Exams and quizzes
 - Case Study Assignments
 - Textbook reading assignments and assigned readings from the scientific literature
 - Discussion assignments and writing assignments
- 3.5 Tentative texts and course materials:
 - Human Parasitology, Fourth Edition (by Burton Bogitsh, Clint Carter, and Tom Oeltmann)
 - Assigned readings from the scientific literature as well as from other authoritative sources.

4. Resources:

- 4.1 Library resources: N/A
- 4.2 Computer resources: N/A

5. Budget implications:

- 5.1 Proposed method of staffing: Current Faculty
- 5.2 Special equipment needed: N/A

5.3 Expendable materials needed: N/A

5.4 Laboratory materials needed: N/A

6. Proposed term for implementation: Fall 2016

7. Dates of prior committee approvals:

Biology Department

02/05/2016

College Graduate Curriculum Committee

Graduate Council

University Senate

Human Parasitology: Biology 561

Instructor: Dr. Cheryl D. Davis

Office: TCCW 349

Office Hours: By appointment

Email: cheryl.davis@wku.edu

Meeting Location	Biology
Meeting Time	TBA / Online
Prerequisites	Graduate Status
Course Description	This course will emphasize the major parasitic pathogens and parasitic diseases of humans through lectures, case studies, digital images, reading assignments and discussion of scientific literature. Intended for students participating in the masters program in biology.
Text & Other Readings	Human Parasitology, Fourth Edition (by Burton Bogitsh, Clint Carter, and Tom Oeltmann. <u>Use of Text:</u> Assigned reading from the textbook will be a course requirement and material covered in the text will be represented on exams. There will also be assigned readings from the scientific literature as well as from other authoritative sources.

Course Objectives: Students will

- 1) Be exposed to major findings, theories, and concepts in the field of human parasitology as well as in the major sub-disciplines driving contemporary research in the field.
- 2) Gain experience working in small groups to discuss and solve relevant clinical case studies.
- 3) Read, discuss and evaluate scientific literature in the field of human parasitology.

Learning Outcomes: Upon successful completion of this course, students should be able to

- 1) Understand and appreciate the biological complexity of human parasitic pathogens and their impact on global health.
- 2) Describe life cycles and transmission dynamics of the major human parasitic pathogens.
- 3) Explain important principles and concepts pertaining to the morphology, physiology, immunology, pathology, and ecology of human parasites and parasitic diseases.
- 4) Use their knowledge and experience to solve case studies relating to human parasitic diseases.
- 5) Critically evaluate scientific literature in the field of parasitology.

Grading: 90.0 to 100% A; 80.0 to 89.9% B; 70.0 to 79.9% C; 60.0 to 69.9% D; <60.0% F

Exams and Quizzes	(450 points)
Case Studies	(100 points)
<u>Assignments/Discussions/Evaluations</u>	<u>(100 points)</u>
Total	(650 points)

Course Information & Policies

Academic Honesty	Academic dishonesty in any form will not be tolerated – violators will be reported to Judicial Affairs and the minimum penalty will be a grade of zero for the exam or assignment. Be advised that student work may be checked using plagiarism detection software.
Engagement	Success in this course depends upon regular attendance, participation, and full engagement in all activities.
Civility	Students are expected to abide by the Code of Student Conduct http://wku.edu/judicialaffairs/?page_id=70
Disability	Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the: Office for Student Disability Services in Downing University Center A-200. The phone number is 745-5004; TTY is 745-3030. Per university policy, please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the OFSDS.
Missed exams or Assignments	Missed exams or assignments will be recorded as a grade of zero unless there is a documented emergency. If a case of documented emergency, the instructor will decide on makeup work on a case-by-case basis.
The Learning Center	The mission of TLC is to promote student success, enhance student performance, and increase student retention at Western Kentucky University. TLC (located at DSU 2141) helps students enhance their academic performance and sharpen their skills to be successful Western Kentucky University graduates. See website for hours and resources: http://www.wku.edu/tlc/
Withdrawal Schedules	See Academic Calendar for Fall 2016 session http://www.wku.edu/registrar/academic_calendars/

COURSE TOPICS:

Introduction to Human Parasitology
Kinetoplastid Parasites of Humans
Other Flagellated Parasites of Humans
Pathogenic Ameba of Humans
Apicomplexan Parasites of Humans
Digenetic Trematode Parasites of Humans
Cestode Parasites of Humans
Nematode Parasites of Humans
Ectoparasites of Humans

**Revise a Course
(Action)**

Date: 1-11-16

College, Department: Ogden, Mathematics

Contact Person: Hope Marchionda, hope.marchionda@wku.edu, 5-2961

1. Identification of course

- 1.1 Course prefix (subject area) and number: MATH 501
- 1.2 Course title: Introduction to Probability and Statistics I

2. Proposed change(s):

- 2.1 course number:
- 2.2 course title:
- 2.3 credit hours:
- 2.4 grade type:
- 2.5 prerequisites:
- 2.6 corequisites:
- 2.7 course description:
Previous: Interpreting and analyzing univariate and bivariate data; probability and sampling distributions; simulation. (Not applicable to the M.S. degree in Mathematics.)
Proposed: Interpreting, analyzing, and simulating univariate and bivariate data; probability and sampling distributions; regression and chi-squared procedures from traditional and randomization approaches.
- 2.8 other:

3. Rationale for revision of course: The course description is being reworded to more accurately convey what is being emphasized in the class.

4. Term of implementation: Fall 2016

5. Dates of committee approvals:

Department	_____ 1-21-16 _____
College Curriculum Committee	_____
Professional Education Council	_____
Graduate Council	_____
University Senate	_____

**Course revision proposals require a Course Inventory Form be submitted by the College Dean's office to the Office of the Registrar.*

**Revise a Course
(Action)**

Date: 1-11-16

College, Department: Ogden, Mathematics

Contact Person: Hope Marchionda, hope.marchionda@wku.edu, 5-2961

1. Identification of course

- 1.1 Course prefix (subject area) and number: MATH 503
- 1.2 Course title: Introduction to Analysis

2. Proposed change(s):

- 2.1 course number:
- 2.2 course title:
- 2.3 credit hours:
- 2.4 grade type:
- 2.5 prerequisites:
- 2.6 corequisites:
- 2.7 course description:
Previous: Examination of selected topics in elementary calculus including sequences, series, limits, continuity, the derivative, and the Riemann integral. Introductory material includes logic, set theory, and functions.
Proposed: Theoretical examination of selected topics in real analysis including sequences, series, limits, continuity, derivatives, and integration.
- 2.8 other:

3. Rationale for revision of course: The course description is being reworded to more accurately convey what is being emphasized in the class.

4. Term of implementation: Fall 2016

5. Dates of committee approvals:

Department

1-21-16

College Curriculum Committee

Professional Education Council

Graduate Council

University Senate

**Course revision proposals require a Course Inventory Form be submitted by the College Dean's office to the Office of the Registrar.*

**Revise a Course
(Action)**

Date: 1-11-16

College, Department: Ogden, Mathematics

Contact Person: Hope Marchionda, hope.marchionda@wku.edu, 5-2961

1. Identification of course

- 1.1 Course prefix (subject area) and number: MATH 504
- 1.2 Course title: Application of Technology to Problems in Mathematics

2. Proposed change(s):

- 2.1 course number:
- 2.2 course title:
- 2.3 credit hours:
- 2.4 grade type:
- 2.5 prerequisites:
- 2.6 corequisites:
- 2.7 course description:

Previous: Integration of technology to solve problems in areas of mathematics including calculus, applied statistics, probability, geometry, and algebra. (Not applicable to the M.S. degree in Mathematics.)

Proposed: Integration of technology to solve problems in areas of mathematics including calculus, applied statistics, probability, geometry, and algebra.

3. Rationale for revision of course: The course description is being reworded to more accurately convey what is being emphasized in the class.

4. Term of implementation: Fall 2016

5. Dates of committee approvals:

Department

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**Revise a Course
(Action)**

Date: 1-11-16

College, Department: Ogden, Mathematics

Contact Person: Hope Marchionda, hope.marchionda@wku.edu, 5-2961

1. Identification of course

- 1.1 Course prefix (subject area) and number: MATH 510
- 1.2 Course title: Intermediate Statistics

2. Proposed change(s):

- 2.1 course number:
- 2.2 course title:
- 2.3 credit hours:
- 2.4 grade type:
- 2.5 prerequisites:
- 2.6 corequisites:
- 2.7 course description:

Previous: Statistical inference including confidence intervals, estimation, tests of significance, comparison of population parameters, and chi-square procedures.

(Not applicable to the M.S. degree in Mathematics.)

Proposed: Extended coverage of experimental design and data collection, statistical inference including confidence intervals, estimation, tests of significance, comparison of population parameters, and multiple regression.

- 2.8 other:

3. Rationale for revision of course: The course description is being reworded to more accurately convey what is being emphasized in the class.

4. Term of implementation: Fall 2016

5. Dates of committee approvals:

Department

1-21-16

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**Revise a Course
(Action)**

Date: 1-11-16

College, Department: Ogden, Mathematics

Contact Person: Hope Marchionda, hope.marchionda@wku.edu, 5-2961

1. Identification of course

1.1 Course prefix (subject area) and number: MATH 511

1.2 Course title: Algebra from an Advanced Perspective

2. Proposed change(s):

2.1 course number:

2.2 course title:

2.3 credit hours:

2.4 grade type:

2.5 prerequisites:

2.6 corequisites:

2.7 course description:

Previous: Intended for teachers wishing to develop a deeper understanding of high school algebra and calculus. Examines links among different fields of mathematics and connections among high school, mathematics, college mathematics and higher mathematics. (Not applicable to the M.S. degree in Mathematics.)

Proposed: Topics in algebra from an advanced perspective including analysis of functions and polynomials, number theory, and fields.

2.8 other:

3. Rationale for revision of course: The course description is being reworded to more accurately convey what is being emphasized in the class.

4. Term of implementation: Fall 2016

5. Dates of committee approvals:

Department

1-21-16

College Curriculum Committee

Professional Education Council

Graduate Council

University Senate

**Course revision proposals require a Course Inventory Form be submitted by the College Dean's office to the Office of the Registrar.*

**Revise a Course
(Action)**

Date: 1-11-16

College, Department: Ogden, Mathematics

Contact Person: Hope Marchionda, hope.marchionda@wku.edu, 5-2961

1. Identification of course

1.1 Course prefix (subject area) and number: MATH 512

1.2 Course title: Geometry from an Advanced Perspective

2. Proposed change(s):

2.1 course number:

2.2 course title:

2.3 credit hours:

2.4 grade type:

2.5 prerequisites:

2.6 corequisites:

2.7 course description:

Previous: Intended for teachers wishing to develop a deeper understanding of underlying concepts of geometry. Examines relationships among different fields of mathematics and connections among high school mathematics, college mathematics and higher mathematics. (Not applicable to the M.S. degree in Mathematics).

Proposed: Topics in geometry from an advanced perspective including a theoretical examination of transformations in real and complex plane; distance congruence, and similarity in a variety of contexts; connections and applications between geometry, trigonometry, and calculus.

2.8 other:

3. Rationale for revision of course: The course description is being reworded to more accurately convey what is being emphasized in the class.

4. Term of implementation: Fall 2016

5. Dates of committee approvals:

Department

1-21-16

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**Course revision proposals require a Course Inventory Form be submitted by the College Dean's office to the Office of the Registrar.*

**Revise a Course
(Action)**

Date: 1-11-16

College, Department: Ogden, Mathematics

Contact Person: Hope Marchionda, hope.marchionda@wku.edu, 5-2961

1. Identification of course

1.1 Course prefix (subject area) and number: MATH 514

1.2 Course title: Application and Modeling for Teachers

2. Proposed change(s):

2.1 course number:

2.2 course title: Mathematical Modeling and Applications

2.3 credit hours:

2.4 grade type:

2.5 prerequisites:

Previous: Mathematics major, mathematics minor, or permission of the instructor.

Proposed: Admission to the Master of Arts in Mathematics program or permission of instructor.

2.6 corequisites:

2.7 course description:

Previous: Utilizes concepts from many fields of mathematics to explore how high school and college mathematics are used in real world settings. Intended for secondary teachers. (Not applicable to the M.S. degree in Mathematics.)

Proposed: Uses mathematical modeling to describe and explore real world problems using algebraic, geometric, and statistical approaches.

2.8 other:

3. **Rationale for revision of course:** MATH 514 is an elective in the MA in Mathematics program. Since this program is designed for teachers, listing the word "teachers" in the course's title is redundant and is not needed. The prerequisite for MATH 514 is being revised to align with other courses that are part of the MA in Mathematics program. The course description is being reworded to more accurately convey what is being emphasized in the course.

4. **Term of implementation:** Fall 2016

5. Dates of committee approvals:

Department

1-21-16

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