

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

REPORT TO THE GRADUATE COUNCIL COMMITTEE

DATE: February 28, 2013

FROM: Ogden College of Science and Engineering

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

| | |
|---------|---|
| Consent | Proposal to Revise Course Catalog Listing Geog 419G, GIS Programming Contact Person: Jun Yan, jun.yan@wku.edu, 5-8952 |
| Action | Proposal to Revise a Program Math 085, Master of Science in Mathematics Contact Person: Ferhan Atici, ferhan.atici@wku.edu, 56229 |
| Action | Proposal to Revise Course Credit Hours Math 598, Communicating Mathematics and Technical Writing Contact Person: Ferhan Atici, ferhan.atici@wku.edu, 56229 |

Members Present: Dr. Martin Stone, Dr. Ivan Novikov, Dr. Zhonghang Xia, Dr. Ferhan Atici, Dr. Raja Dakshinamurthy, Dr. Daniel Jackson, Dr. Kelly Madole, Kaylee Ranck (nonvoting)

Cathleen Webb, Chair

OLD BUSINESS

Martin/Stone moved for approval of the minutes from the December 13th, 2013 meeting. Motion approved.

NEW BUSINESS

Department of Psychological Sciences

Stone/Jackson moved for approval of the Information Item and Consent Items. Motion passed with suggested amendments.

Jackson/Stone moved for approval of the following Action Items. Motion passed.

Revisions to a Course, PSYS 513, Advanced Statistical Analysis

Proposal to Create a New Course, PSYS 465G, Psychopharmacology

Proposal to Create a New Course, PSYS 530, Conditioning and Learning

Proposal to Create a New Course, PSYS 579: IO Internship, Internship in Industrial-Organizational Psychology

Proposal to Create a New Course, PSYS 581, Professional and Ethical Issues in Psychological Sciences

Proposal to Create a New Course, PSYS 595, Practicum in Psychological Sciences

Proposal to Create a New Course, PSYS 599, Thesis Research/Writing

Proposal to Create a New Course, PSYS 600, Maintain Matriculation

Jackson/Stone moved for approval of the following Action Item. Motion passed.

Proposal to Revise a Program, Program Reference Number: 092, Master of Arts: Psychology

Proposal Date: 2/14/2014

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

Contact Person: Jun Yan, jun.yan@wku.edu, 5-8952

1. Identification of course:

1.1 Course prefix (subject area) and number: Geog 419G

1.2 Course title: GIS Programming

2. Current course catalog listing: Planning and implementing GIS within an organization. Designing and developing GIS applications to support spatial decision making. Course fee.

3. Proposed course catalog listing: Learning the process of expanding GIS functionalities and customizing a GIS system via computer programming.

4. Rationale for revision of the course catalog listing: The current GIS industry focuses more on developing customized GIS functions via computer programming. We have modified the course content to meet new requirements of the GIS job market. The course covers a number of techniques and methods that GIS analysts use to develop customized GIS functionalities for solving real-world problems.

5. Proposed term for implementation: Fall 2014

6. Dates of prior committee approvals:

Department Geography and Geology

OCSE Graduate Curriculum Committee

Graduate Council

University Senate

2/14/2014

**Ogden College of Science and Engineering
Department of Mathematics
Proposal to Revise a Program
(Action Item)**

Contact Person: Ferhan Atici; e-mail: ferhan.atici@wku.edu; Phone: 745-6229

1. Identification of program:

- 1.1 Reference Number: 085
- 1.2 Current Program Title: Master of Science in Mathematics
- 1.3 Credit hours: 30

2. Identification of the proposed program changes:

Revising the credit hours from 1.5 to 3 credit hours for the course Graduate Seminar will help us prepare our students better to write a thesis. This course will be listed in the electives. Students may also take this course as a research tool.

3. Detailed program description:

| Current Program | Proposed Program |
|--|--|
| <p>The M.S. (general option) requires traditional courses in analysis, algebra, topology, and applied mathematics, and is recommended for students who wish to obtain a Ph. D. degree, to teach in a community college, or to seek employment in industry with an emphasis on conceptual foundations. The M.S. (computational option) is designed for students seeking employment in industry with an emphasis on computational mathematics and/or computer science.</p> <p>Each option for the M.S. in Mathematics requires a minimum of 30 hours of graduate-level coursework.</p> | <p>The M.S. (general option) requires traditional courses in analysis, algebra, topology, and applied mathematics, and is recommended for students who wish to obtain a Ph. D. degree, to teach in a community college, or to seek employment in industry with an emphasis on conceptual foundations. The M.S. (computational option) is designed for students seeking employment in industry with an emphasis on computational mathematics and/or computer science.</p> <p>Each option for the M.S. in Mathematics requires a minimum of 30 hours of graduate-level coursework.</p> |
| General option: | General option: |
| The following are required: | The following courses are required: |
| (1) Algebra: MATH 417G Analysis: MATH 431G | (1) Algebra: MATH 417G Analysis: MATH 431G |

| Topology: MATH 439G | Topology: MATH 439G |
|--|--|
| If equivalent courses were taken at the undergraduate level, then the student must substitute appropriate graduate mathematics courses selected in consultation with a Mathematics Department graduate advisor. | If equivalent courses were taken at the undergraduate level, then the student must substitute appropriate graduate mathematics courses selected in consultation with a Mathematics Department graduate advisor. |
| (2) An applied Mathematics course selected from MATH 529, 531, 535, 536, 540, 541, 542, 550, 570, STAT 549, or as approved by the Departmental Graduate Committee | (2) An applied Mathematics course selected from MATH 529, 531, 535, 536, 540, 541, 542, 550, 570, STAT 549, or as approved by the Departmental Graduate Committee |
| (3) MATH 532 | (3) MATH 532 |
| (4) One of the following two-course sequences: MATH 417G-517, 439G-539, 450G-550, 435G-535, 470G-570, 529-540, 435G-531, 535-536; 405G-406G can be taken by students who have substituted a 500-level course for at least one of the three courses listed in (1). | (4) One of the following two-course sequences: MATH 417G-517, 439G-539, 450G-550, 435G-535, 470G-570, 529-540, 435G-531, 535-536; 405G-406G can be taken by students who have substituted a 500-level course for at least one of the three courses listed in (1). |
| Students who choose to write a thesis are required to complete 6 hours of MATH 599 - Thesis Research and Writing and to give an oral defense of the thesis. | Students who choose to write a thesis are required to complete 6 hours of MATH 599 - Thesis Research and Writing and to give an oral defense of the thesis. |
| The remaining mathematics courses in the student's program must be chosen from MATH 405G, 406G, 415G, 423G, 435G, 450G, 470G, 504, 517, 523, 529, 531, 535, 536, 539, 540, 541, 542, 550, 560, 570, 590 or STAT 549. | The remaining mathematics courses in the student's program must be chosen from MATH 405G, 406G, 415G, 423G, 435G, 450G, 470G, 504, 517, 523, 529, 531, 535, 536, 539, 540, 541, 542, 550, 560, 570, 590, 598 (if it is not taken as a research tool) or STAT 549. |
| A maximum of 12 hours at the 400G-level may be included in the entire program. | A maximum of 12 hours at the 400G-level may be included in the entire program. |
| A research tool is required and may entail coursework beyond the 30 hours of mathematics. The research tool can be fulfilled in a variety of ways, some of which are listed below: a) Taking the MATH 598 Graduate Seminar (1.5 cr hr each) for two semesters. b) Courses in other disciplines. The research tool course should be in disciplines that have a strong relation to mathematics. For example, any graduate or 400 level computer science course pre-approved by the student's graduate advisor will be accepted. However, a student | A research tool is required and may entail coursework beyond the 30 hours of mathematics. The research tool can be fulfilled in a variety of ways, some of which are listed below: a) Taking the MATH 598 Graduate Seminar (3 cr hrs) if it is not taken as an elective. b) Courses in other disciplines. The research tool course should be in disciplines that have a strong relation to mathematics. For example, any graduate or 400 level computer science course pre-approved by the student's graduate advisor will be accepted. However, a student |

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| <p>with no prior programming experience cannot programming experience cannot take such a course and instead could choose a first year undergraduate programming course.</p> <p>c) Learning how to use a standard statistical or mathematical package (such as SAS, SPSS, R or Mathematica) by taking a course.</p> <p>The research tool cannot be taking during the last semester.</p> | <p>with no prior programming experience cannot take such a course and instead could choose a first year undergraduate programming course.</p> <p>c) Learning how to use a standard statistical or mathematical package (such as SAS, SPSS, R or Mathematica) by taking a course.</p> <p>The research tool cannot be taking during the last semester.</p> |
| <p>In addition, all students in the M.S. program (general option) must have a working knowledge of a high-level programming language or computer algebra system.</p> | <p>In addition, all students in the M.S. program (general option) must have a working knowledge of a high-level programming language or computer algebra system.</p> |

4. Rationale for the proposed program change:

Having more credit hours in Graduate Seminar course will prepare students better for their own thesis work.

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

6. Dates of prior committee approvals:

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|---------------------------|------------------|
| Department of Mathematics | <u>2/21/2014</u> |
| OCSE Graduate Committee | _____ |
| Graduate Council | _____ |
| University Senate | _____ |
| Provost | _____ |

Proposal Date: 02/05/2014

**Ogden College of Science and Engineering
Department of Mathematics
Proposal to Revise Course Credit Hours
(Action Item)**

Contact Person: Ferhan Atici; e-mail: ferhan.atici@wku.edu; Phone: 745-6229

1. Identification of course:

- 1.1 Current course prefix (subject area) and number: MATH 598
- 1.2 Course title: Graduate Seminar: Communicating Mathematics and Technical Writing
- 1.3 Credit hours: 1.5

2. Proposed course credit hours: 3 credit hours

3. Rationale for the revision of course credit hours:

Revising the credit hours from 1.5 to 3 credit hours for the course Graduate Seminar will help us better prepare our students to write a thesis.

4. Proposed term for implementation: Fall 2014

5. Dates of prior committee approvals:

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| Department/Unit Mathematics | 02/21/2014 |
| Ogden College Curriculum Committee | _____ |
| Professional Education Council (if applicable) | _____ |
| General Education Committee (if applicable) | _____ |
| Undergraduate Curriculum Committee (if applicable) | _____ |
| Graduate Council (if applicable) | _____ |
| University Senate | _____ |