

APPLICATION FOR NEW COURSE

1. Submitted by the College of Arts & Sciences Date: 2/19/08

Department/Division proposing course: Mathematics

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number MA 601

b. Title* Teaching College Mathematics

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:

Teaching College Math

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

- CLINICAL COLLOQUIUM DISCUSSION LABORATORY LECTURE
 INDEPEND. STUDY PRACTICUM RECITATION RESEARCH RESIDENCY
 SEMINAR STUDIO OTHER – Please explain: _____

d. Please choose a grading system: Letter (A, B, C, etc.) Pass/Fail

e. Number of credit hours: 1

f. Is this course repeatable? YES NO If YES, maximum number of credit hours: 3

g. Course description:

A seminar for teaching assistants on the basics of teaching mathematics at the college level as well as use of appropriate technology. Includes topics such as syllabus construction, lesson planning, grading assignments, web pages, typesetting mathematics with LaTeX. Required of all new graduate teaching assistants in mathematics.

h. Prerequisite(s), if any:

Must hold teaching assistantship in mathematics or consent of the instructor.

i. Will this course be offered through Distance Learning? YES NO

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

- Internet/Web-based Interactive video Extended campus Kentucky Educational Television (KET/teleweb) Other

Please describe "Other": _____

3. Teaching method: N/A or Community-Based Experience Service Learning Component Both

4. To be cross-listed as: _____
Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Fall / 2008

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6. Course to be offered (please check all that apply): Fall Spring Summer
7. Will the course be offered every year? YES NO

If NO, please explain: _____

8. Why is this course needed?

Per SACS requirement, new teaching assistants are required to receive training from the University. This course will be a way to give credit to the students undergoing this training.

9. a. By whom will the course be taught? Claus Schubert
- b. Are facilities for teaching the course now available? YES NO
- If NO, what plans have been made for providing them?
- _____

10. What yearly enrollment may be reasonably anticipated?

15

11. a. Will this course serve students primarily within the department? Yes No
- b. Will it be of interest to a significant number of students outside the department? YES NO
- If YES, please explain.

12. Will the course serve as a University Studies Program course[†]? YES NO
- If YES, under what Area? _____

[†]AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

- traditional – offered in corresponding departments at universities elsewhere
- relatively new – now being widely established
- not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? Yes No

15. Is this course part of a proposed new program? YES NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? YES NO
- If YES[†], list below the programs that will require this course:

[†]In order to change the program(s), a program change form(s) must also be submitted.

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17. The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.
18. Check box if course is 400G or 500. If the course is 400G- or 500-level, you must include a syllabus showing differentiation for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See SR 3.1.4)

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Russell Brown Phone: 257-3951 Email: russell.brown@uky.edu

20. Signatures to report approvals:

02/19/2008
DATE of Approval by Department Faculty

ZHONGWEI SHEN / 
printed name Reported by Department Chair signature

3/25/08
DATE of Approval by College Faculty

Leonidas Pachas / 
printed name Reported by College Dean signature

/
* DATE of Approval by Undergraduate Council

/
printed name Reported by Undergraduate Council Chair signature

/
* DATE of Approval by Graduate Council

/
printed name Reported by Graduate Council Chair signature

/
* DATE of Approval by Health Care Colleges Council (HCCC)

/
printed name Reported by Health Care Colleges Council Chair signature

/
* DATE of Approval by Senate Council

/
Reported by Office of the Senate Council

/
* DATE of Approval by University Senate

/
Reported by Office of the Senate Council

*If applicable, as provided by the *University Senate Rules*

ARTS AND SCIENCES
EDUCATIONAL POLICY COMMITTEE
INVESTIGATOR REPORT

<http://www.as.uky.edu/working/collegiate-governance/education-policy-committee/proposals/default.aspx>

INVESTIGATING AREA: Natural & Math. Sci. COURSE, MAJOR, DEGREE or PROGRAM: MA 601

DATE FOR EPC REVIEW: 3/25/08 CATEGORY: NEW, CHANGE, DROP

INSTRUCTIONS: This completed form will accompany the course application to the Graduate/Undergraduate Council(s) in order to avoid needless repetition of investigation. The following questions are included as an outline only. Be as specific and as brief as possible. If the investigation was routine, please indicate this. The term "course" is used to indicate one course, a series of courses or a program, whichever is in order. Return the form to Leonidas Bachas Associate Dean, 275 Patterson Office Tower for forwarding to the Council(s). ATTACH SUPPLEMENT IF NEEDED.

1. List any modifications made in the course proposal as submitted originally and why.
*Learning objectives added.
course requirements clarified*
2. If no modifications were made, review considerations that arose during the investigation and the resolutions.

3. List contacts with program units on the proposal and the considerations discussed therein.
Russell Brown - see attached e-mail

4. Additional information as needed.
Still need a grading scale - see comment in e-mail

5. A&S Area Coordinator Recommendation:

APPROVE, APPROVE WITH RESERVATION, OR DISAPPROVE

6. A&S Education Policy Committee Recommendation:

APPROVE, APPROVE WITH RESERVATION, OR DISAPPROVE

7. Ruth Beattie Date: March 25, 2008
A&S Educational Policy Committee,
Ruth Beattie rebeat1@uky.edu 257-7641

Proposed Syllabus for MA 601 - Teaching College Mathematics

MA 601 is a seminar for teaching assistants on the basics of teaching mathematics at the college level as well as use of appropriate technology.

Course Objectives

- (1) Teaching assistants will be able to engage students in the classroom.
- (2) Teaching assistants will be able to write tests and quizzes to assess students learning.
- (3) Teaching assistants will be able to use appropriate technology to prepare course materials and teach mathematics.

Outline of topics to be covered:

- Organizational meeting; teaching basics
- Syllabus construction
- What is a recitation section?
- Preparing for the first day of class
- Micro-Teaching
- Assessing and evaluating student work
- Lesson planning
- Active learning; group work
- L^AT_EX
- HTML / Web pages
- Maintaining control in the classroom; dealing with difficult situations
- Office hours

Grading: To receive a grade of A, students must participate in all sessions, and show exceptional performance in all assignments. Students may earn a B by showing high achievement and and a C with satisfactory achievement. Two or more unexcused absences may result in a lower final grade.

References:

- Rishel, "Teaching First: A Guide for New Mathematicians", MAA Notes #54
- Krantz, "How to Teach Mathematics", Second Edition, American Mathematical Society

Re: MA601

R. Brown [rmb.uky.math@gmail.com]

Sent: Monday, March 17, 2008 8:24 PM
To: Beattie, Ruth E
Cc: Qiang Ye [qye@ms.uky.edu]; Schubert, Claus A
Attachments: ma601-syllv2.pdf (38 KB)

2008/3/3, Beattie, Ruth E <rebeat1@email.uky.edu>:

> Russell,

>

> I am a member of the College Educational Policy Committee and I am currently reviewing the MA 601 proposal.

>

> A few questions/ information needed.

>

> 1. Why should students get academic credit for work/training that is automatically part of their TA duties?

We believe that we are adding something new to the training of our teaching assistants with this course. The course will cover mechanical skills needed to teach. But it will also require students to think carefully about what we teach and how we teach. This is an important part of the professional development of our students and is deserving of academic credit.

Several departments at UK already have such courses (PHY 571, and PPA 799). Similar courses are found at a number of institutions including Minnesota (MATH 8001), Berkeley (MATH 300). One of our assistant professors, Ben Braun took a three credit course before he entered the classroom as a teaching assistant at Wash. U. in St. Louis.

>

> 2. A listing of student learning objectives is required (a listing of what the students will be able to do at the end of the course not just what they will learn)

A revised syllabus is attached.

>

> 3. The course academic requirements, grading scale and scheme need to be clarified.

>

> a. What sort of assignments will the students complete? Give some examples. Roughly how many?

> b. What % of their grade is based on participation and what percentage on the assignments?

> c. The grading scale should indicate what % represents an A, B etc. It should be more quantitative than just "exceptional performance" or you could opt for a Pass/fail grading system.

a. Here are some examples of assignments. We expect one short assignment ore reading per week.

- Create a sample syllabus
- Create a sample lesson plan
- Grade sample exams
- Write a mathematics quiz or exam using LaTeX

- Design a web page and post basic class / contact information
- Observe a fellow TA and discuss aspects of the class that went well and that did not go so well.
- Prepare a micro-teaching lesson

b. We expect that grading to be roughly 50% participation and 50% assignments.

c. I do not believe that it makes sense to indicate a percentage grading scale for each letter grade. Without a complete set of assignments, grading rubrics, and curving policies the percentage scores have little meaning. The grading standards given in the syllabus are taken from the academic requirements section of the University Bulletin (see p. 61).

We considered Pass/Fail grading, but a call to the graduate school reminded me that a graduate student may not take a course Pass/Fail. I believe that assigning letter grades is an indication to our students of the importance that we place on our teaching. Our faculty approved this grading, though there was some dissent.

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- > If you can get this information to me before March 25th, I will bring it to the EPC committee for action on the 25th.
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- >
- > Ruth E. Beattie
- > Director of Undergraduate Studies
- > Associate Professor
- > Dept. of Biology
- > University of Kentucky
- > Lexington, KY 40506
- > E-mail: rebeat1@email.uky.edu<mailto:rebeat1@email.uky.edu>
- > Telephone: 859-257-7647
- > Fax: 859-257-1717
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Russell Brown :-: russell.brown@uky.edu

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If I were founding a university I would begin with a smoking room; next a dormitory; and then a decent reading room and a library. After that, if I still had more money that I couldn't use, I would hire a professor and get some text books.

--Stephen Leacock

Nikou, Roshan

From: Graduate.Council.Web.Site@www.uky.edu
Sent: Monday, April 07, 2008 2:19 PM
To: Nikou, Roshan
Cc: Price, Cleo
Subject: Investigator Report

AnyForm User: www.uky.edu
AnyForm Document: <http://www.research.uky.edu/gc/GCInvestigatorReport.html>
AnyForm Server: www.uky.edu (/www/htdocs/AnyFormTurbo/AnyForm.php)
Client Address: 128.163.153.93

College/Department/Unit: = MA 601
Category:_ = New
Date_for_Council_Review: = 4/10/08
Recommendation_is:_ = Approve
Investigator: = Bill Smith
E-mail_Address = bsmith@enr.uky.edu
1__Modifications: =
2__Considerations: =
3__Contacts: = I will contact Russell Brown in Math prior to the April 10 meeting (if he is available - I have left a message)
4__Additional_Information: = I have reservations about having a regular grade for this class. I think Russell is right about the Grad School not allowing P/F for a grad class. They have indicated that it does not count towards a degree so that makes me feel better. Given that, I don't see any other reason to stop its progress through the system as Math will be the ones to have to deal with possible grade inflation.
I kept this off the consent agenda to air out the grade thing. Let me know if there are questions - Bill

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Dean Blackwell,

At our April 10 Graduate Council meeting, I made the motion to accept the application for MA 601 subject to the Department of Mathematics agreeing to change it to a non-repeatable course (change line 2(f) by checking the "no" box). In communication with Dr. Brown, the Department of Mathematics has agreed to that stipulation. Given the unanimous vote at the meeting, the course proposal should be forwarded to the Senate for approval with the change of status.

Please let me know if you need any more information from me. Best regards
- Bill Smith