

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, August 29, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Rick Gorvett, A.J. Hildebrand, Heather Johnson, Stephen Ullom, Randy McCarthy (*ex of*)

Committee members absent: Sergei Ivanov

Others present: none

Meeting start: 2:00 pm

Meeting end: 2:58 pm

Location: 331 Altgeld Hall

This meeting constituted the first gathering of the Undergraduate Affairs Committee (UAC) for the Fall 2006 semester. Chair Robinson welcomed new and continuing members. Gorvett agreed to act as secretary.

The following items were considered:

- 1) UAC membership: Discussed and ***agreed to offer UAC membership for the 2006-7 academic year to graduate student Dan Lior*** (UAC roster should include one graduate student, in addition to one undergraduate student (currently Heather Johnson).) ***Robinson will extend an offer to Lior.***
- 2) Guidance from EC: There were two responses to Robinson's request for UAC guidance/suggestions from the EC:
 - i) Math 418: Haboush's comments about the Math 418 syllabus. ***We will seek input from the algebra area on this.***
 - ii) Teaching load: Katz's e-mail regarding bigger classes.
- 3) McCarthy commented on, and the UAC preliminarily discussed, a variety of undergraduate issues:
 - i) Last year's UAC activity: Summarized several decisions made by the UAC during the 2005-6 academic year.
 - ii) Faculty for large classes: Tenured/tenure-track faculty tend not to teach our large classes (e.g., calculus), and thus those courses do not benefit from the consistency that could result from greater teaching experience (as well as experience within UIUC's math program). McCarthy recommended additional training regarding the teaching of these courses for TAs, visitors, and post-docs.

- iii) Calculus and computer-based aids: Over the summer, Muncaster considered and experimented with computer-based aids regarding homework assignments and placement tests. Muncaster is preparing reports regarding these summer activities – ***UAC members should consider what issues and experiences would like to hear about in these summer reports.*** Also, a task force is considering alternative calculus textbooks.
- iv) Linear algebra: McCarthy would like the UAC to consider adjustments to the linear algebra course offerings – Math 125, 225, and 415 – including possible consolidation of 125 and 225, and updating of syllabi (e.g., adding references to derivatives).
- v) Biology: McCarthy is talking with Biology about creating a bio-math course and helping them to improve their students' quantitative skills and exposure.

The next UAC meeting is scheduled for Tuesday, September 5, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, September 5, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Rick Gorvett, A.J. Hildebrand, Heather Johnson, Stephen Ullom, Randy McCarthy (*ex of*), Robert Muncaster (*ex of*)

Committee members absent: Sergei Ivanov

Others present: none

Meeting start: 2:00 pm Meeting end: 2:58 pm Location: 331 Altgeld Hall

Minutes from the August 29 meeting were reviewed and approved.

The following items were considered:

- 1) UAC membership: Robinson reported that graduate student Dan Lior is unavailable to meet with the UAC during the Fall 2006 semester. ***Robinson will invite another graduate student, Mark Harper, to participate on the UAC in the Fall, and will ask Lior if he would be available and interested in participating in Spring 2007.***
- 2) MATRIX Math Club: McCarthy and Johnson reported that the initial MATRIX meeting on August 31 was a big success.
- 3) Calculus – Summer Activities: Muncaster reported on calculus-related activities that occurred over the 2006 summer. A committee is looking at alternative calculus textbooks, along with different electronic assignment systems. Over the summer, 5 classes were taught in the calculus sequence, each using a different textbook / electronic assignment system combination. Based in part on those experiences, the committee is scheduled to report and make a recommendation to the UAC by Friday, October 13, 2006. The goal is to begin to introduce a selected teaching model incorporating the approved textbook and electronic assignment system for Spring 2007.
- 4) Linear Algebra: McCarthy noted that essentially only Economics students will be left next year as an audience for Math 125. We may want to consider folding together Math 125 and 225.
- 5) Business Calculus: A brief discussion of business calculus courses and their relationship to the Math 221-231-241 calculus sequence occurred.

The next UAC meeting is scheduled for Tuesday, September 12, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, September 12, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Rick Gorvett, Marc Harper, A.J. Hildebrand, Sergei Ivanov , Heather Johnson, Randy McCarthy (*ex of*), Robert Muncaster (*ex of*)

Committee members absent: Stephen Ullom

Others present: none

Meeting start: 2:00 pm Meeting end: 2:57 pm Location: 331 Altgeld Hall

Minutes from the September 5 meeting were reviewed and approved.

The committee welcomed Marc Harper, this semester's graduate student UAC member.

The following items were considered:

- 1) Fall 2007: Muncaster reported that the Fall 2007 semester timetable deadline is January 5, 2007. This will be an important date for any potential course changes – e.g., with respect to Math 125 and 225.
- 2) Outreach: Gorvett discussed outreach efforts of the actuarial science program. McCarthy discussed outreach efforts (or efforts having outreach potential) in Math, including ICTM, Math Co./MATRIX, honors sequence, and Putnam team. We have not really had problems attracting students.
- 3) Math 125 and 225: McCarthy reported that the Economics Department is currently considering and discussing the issue and potential impact of our folding Math 125 into 225.
- 4) Math 415: The content and disposition of Math 415 was discussed.
- 5) Course Numbering: ***UAC members should consider how we might formalize the expectations associated with numbering a course at the 200- vs 300- vs 400-level.***

The next UAC meeting is scheduled for Tuesday, September 19, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, September 19, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Rick Gorvett, Marc Harper, A.J. Hildebrand, Sergei Ivanov , Heather Johnson, Randy McCarthy (*ex of*), Robert Muncaster (*ex of*), Stephen Ullom

Committee members absent: none

Others present: none

Meeting start: 2:00 pm Meeting end: 2:59 pm Location: 331 Altgeld Hall

Minutes from the September 12 meeting were reviewed and approved.

The following items were considered:

- 1) Outreach: Potential grants for outreach efforts were discussed.
- 2) Linear Algebra
 - a) McCarthy presented registration numbers for recent semesters for our three linear algebra courses – Math 125, Math 225, and Math 415.
 - b) The impact of merging Math 125 and 225 was discussed.
 - c) The possibility of creating two or three different versions of Math 415, each directed at different audiences, was discussed. ***Several members of the committee will consider and suggest possible topics and syllabi associated with three potential courses***, directed toward, respectively,
 - i) Mathematics majors.
 - ii) Engineering students.
 - iii) Actuarial science, finance, and economics students.
- 3) Course Numbering: ***Muncaster will forward to the committee possible summary guidelines / requirements for courses to be numbered at the 200-, 300-, and 400-levels.***

The next UAC meeting is scheduled for Tuesday, September 26, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, September 26, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Rick Gorvett, Marc Harper, A.J. Hildebrand, Sergei Ivanov , Heather Johnson, Randy McCarthy (*ex of*), Robert Muncaster (*ex of*), Stephen Ullom

Committee members absent: none

Others present: none

Meeting start: 2:00 pm Meeting end: 2:58 pm Location: 331 Altgeld Hall

Minutes from the September 19 meeting were reviewed and approved.

The following items were considered:

- 1) Math 490: A proposal for a section of Math 490, "Topology of Surfaces," from Jeremy Tyson and Ilya Kapovich was distributed and discussed. They had originally wanted to run this course in Spring 2007. However, they have recently decided to request that it be offered in Fall 2007. ***The UAC will consider this request at a meeting toward the end of this (Fall 2006) semester.***
- 2) Linear Algebra
 - a) General discussion continued on our linear algebra course offerings.
 - b) Robinson distributed a suggested course outline for a version of Math 415 targeted at math majors.
 - c) Gorvett reported briefly on responses from the actuarial science program's Corporate Advisory Council regarding appropriate topics for coverage in a Math 415 course targeted at actuarial science majors. ***Gorvett will develop a suggested course outline for such a course.***
 - d) Muncaster reported on his examination of linear algebra texts. ***Muncaster will develop a suggested course outline for a Math 415 course targeted at engineering majors.***
- 3) Calculus Textbook: Muncaster requested advice on whether and how the selection of a new calculus textbook for the Math 221 / 231 / 241 sequence should be affected by the fact that more business students will be taking this sequence in the future (due to changes in the College of Business math requirements).

The next UAC meeting is scheduled for Tuesday, October 3, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, October 3, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Rick Gorvett, Marc Harper, A.J. Hildebrand, Sergei Ivanov , Heather Johnson, Randy McCarthy (*ex of*), Robert Muncaster (*ex of*), Stephen Ullom

Committee members absent: none

Others present: none

Meeting start: 2:00 pm Meeting end: 2:54 pm Location: 331 Altgeld Hall

Minutes from the September 26 meeting were amended and approved.

The following items were considered:

- 1) Math 490: Two issues for Spring 2007:
 - a) Section to be taught by Ganter: approved last (Spring 2006) semester by the UAC. This approval carries forward.
 - b) Section to be taught by Palmore: ***UAC requests that a blurb about the course be sent to McCarthy.***

- 2) Linear Algebra (specifically, Math 125 and 225):
 - a) McCarthy proposed that, beginning Fall 2007, Math 225 be consolidated into large lecture format, with no recitation sections, meeting three hours per week for two hours of credit; prerequisite for Math 225 to be changed to Math 012. Discussion ensued. ***Approved unanimously by UAC; recommendation to be forwarded to Katz and Muncaster.***
 - b) McCarthy proposed that, beginning Fall 2007, Math 125 be folded into 225 or, if necessary, sustained as 125 just for economics students, with a single TA assigned. Discussion ensued. ***Approved unanimously by UAC; recommendation to be forwarded to Katz and Muncaster.***
 - c) McCarthy reported that the College of Aviation has requested that its major requirement be changed from Math 125 to Math 124. Discussion ensued. ***Supported unanimously by UAC***

- 3) Math 234: McCarthy reported that ACES likes, and wants to continue requiring, Math 234 (which will also be allowed toward a business minor).

- 4) Math 284: McCarthy reported that engineering students on-campus cannot use this course toward their degrees, but that engineering transfer students can. This presents potential problems.
- 5) Math 466: McCarthy reported that Math 466 (Markov Processes) has not run in several years, and proposed that it be taken off the books. ***Approved unanimously by UAC; recommendation to be forwarded to Katz and Muncaster.***
- 6) Classroom desk issue: McCarthy reported that desks keep disappearing from a particular room on campus which hosts a section of a math course. This has been causing problems for several weeks. ***Muncaster will look into this, and report back to the UAC.***
- 7) Math 415 / 417 / 418: Robinson reported that the algebra group is looking into these courses, and considering the distribution of topics they cover.

The next UAC meeting is scheduled for Tuesday, October 10, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, October 10, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Rick Gorvett, Marc Harper, A.J. Hildebrand, Heather Johnson, Randy McCarthy (*ex of*), Robert Muncaster (*ex of*), Stephen Ullom

Committee members absent: Sergei Ivanov

Others present: none

Meeting start: 2:00 pm Meeting end: 2:55 pm Location: 331 Altgeld Hall

Minutes from the October 3 meeting were amended and approved.

The following items were considered:

- 1) Classroom desk issue: Muncaster reported on the status of this problem, which pertains to 170 Everitt Lab. The issue and efforts at its resolution are ongoing, and ***Muncaster will continue to oversee and monitor.***
- 2) Textbook issues: Muncaster reported on the following:
 - a) Calculus text for Math 234 – recommends a new edition of a “brief” version of the textbook, which is about \$30 less expensive than the full version. ***Muncaster will discuss with Math 234 instructors and the publisher.***
 - b) Discrete math text for Math 213 – A new edition has been published. ***Ullom will review.***
- 3) Linear Algebra (Math 415): Gorvett presented a possible outline for an actuarial science / economics / finance version of Math 415. Discussion and comments were appreciated, and ***Gorvett will consider further and refine this outline.***

The next UAC meeting is scheduled for Tuesday, October 17, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, October 17, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Rick Gorvett, Marc Harper, A.J. Hildebrand, Sergei Ivanov, Heather Johnson, Randy McCarthy (*ex of*),

Committee members absent: Robert Muncaster (*ex of*), Stephen Ullom

Others present: none

Meeting start: 2:00 pm Meeting end: 2:41 pm Location: 331 Altgeld Hall

Minutes from the October 10 meeting were approved.

The following items were considered:

- 1) Major/Minor Fair: McCarthy reported on Math's participation in the Major/Minor Fair. He suggests we need to gather and disseminate more information regarding non-teaching careers in mathematics.
- 2) Meeting with Engineering: McCarthy reported that he will be meeting with the assistant deans in Engineering on Monday, Oct. 23. Items to be discussed include:
 - a) Credit issues for Math 284 (differential equations).
 - b) Credit issues for Calculus III.
 - c) Team-taught calculus.
 - d) An engineering version of Math 415.
- 3) Linear Algebra: Math 415 was briefly discussed. Also, McCarthy mentioned that Math 125 will likely have to be offered next year, for business students. Robinson reported that the algebra group has created a committee to examine the Math 415-417-418 sequence.
- 4) Biology and Math: McCarthy reported on his discussions with the biology dept regarding bio-math and the possibility of a version of Calculus II for biology majors.
- 5) MATRIX: Johnson reported that MATRIX, the undergraduate math organization, will have a meeting on Thursday, Oct 19.

The next UAC meeting is scheduled for Tuesday, October 24, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, October 24, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Rick Gorvett, Marc Harper, A.J. Hildebrand, Sergei Ivanov, Heather Johnson, Randy McCarthy (*ex of*),

Committee members absent: Robert Muncaster (*ex of*), Stephen Ullom

Meeting start: 2:00 pm Meeting end: 2:59 pm Location: 331 Altgeld Hall

Minutes from the October 17 meeting were amended and approved.

The following items were considered and discussed:

- 1) Calculus Text: Muncaster reported on the progress of the calculus textbook committee. The committee is working, and members have specific assignments associated with the committee's overall task.
- 2) Meeting with Engineering: McCarthy reported on the meeting he had with assistant deans in Engineering on Monday, Oct. 23. Specific items:
 - a) Credit issues for Math 284 (differential equations): Engineering will need to decide how to handle the curricular differences between Math 284 and Math 385 – e.g., for transfer students, will 284 credit be permitted to replace a 385 requirement? We may need to make clearer the differences between 284 and 385.
 - b) Credit issues for Calculus III: transfers into Math 242 will be handled on an individual case basis.
 - c) Calculus II for Engineering: a section of Math 230 specifically for engineering students has been running for two years. We will need to decide, with Engineering, how to proceed with this.
- 3) Transfers into Business: McCarthy reported on an initiative of the College of Business, that would require any inter-college transfers into Business to occur after a student's first year, and further require calculus through Calc II.
- 4) Linear Algebra Texts: Muncaster reported on his examination of several texts, copies of which he brought to the meeting. He will be continuing his examination of these and possibly other texts.

The next UAC meeting is scheduled for Tuesday, October 31, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, October 31, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Marc Harper, A.J. Hildebrand, Sergei Ivanov, Heather Johnson, Randy McCarthy (*ex of*), Robert Muncaster (*ex of*), Stephen Ullom

Committee members absent: Rick Gorvett

Meeting start: 2:00 pm Meeting end: 2:54 pm Location: 331 Altgeld Hall

Minutes from the October 24 meeting were approved.

The following items were discussed.

- 1) The Committee voted to abolish Math 244 (Business calculus 2); the course has not been offered for several years.
- 2) McCarthy reported on a meeting with engineering and also on a meeting with the associate deans. The main topic was testing for admission to courses up to the level of calculus 2.
- 3) Muncaster reported on progress in choosing a calculus text. The choice has been narrowed to two books, Stewart and Smith-Minton. A decision is expected in about two weeks.
- 4) Robinson reported that the Algebra Group subcommittee charged with reviewing the course descriptions for Math 417 and 418 has begun its deliberations.
- 5) McCarthy pointed out that an early decision on the reform of Math 415 and the creation of new versions for actuarial science and engineering was desirable. This is because approval is needed from many campus units.

The next meeting of the UAC will be on Tuesday, November 7 at 2pm in 331 AH.

Respectfully submitted,

Derek Robinson (Secretary pro temp).

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, November 7, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Kevin Ford, Rick Gorvett, Marc Harper, A.J. Hildebrand, Heather Johnson, Randy McCarthy (*ex of*), Robert Muncaster (*ex of*), Stephen Ullom

Committee members absent: Robert Bauer, Sergei Ivanov

Meeting start: 2:00 pm Meeting end: 3:02 pm Location: 331 Altgeld Hall

Minutes from the October 31 meeting were amended and approved.

The following items were considered and discussed:

- 1) Meeting with Engineering: McCarthy reported on his meeting with the College of Engineering, specifically on the discussion of early math courses (e.g., calculus, Math 115).
- 2) Economics Dept.: McCarthy reported that the Econ Dept wants to require Math 220 and Math 231 for their majors. He is discussing with them the appropriateness of their requiring Calculus II – one alternative might be to work with them to devise a special econ-oriented Calc II course. McCarthy also mentioned that Econ is currently pushing their students away from Math 125, and toward either Calc II or Math 225.
- 3) Math 453 – Number Theory: Ford reported that the number theory group is recommending a new text – *Elementary Number Theory* by Strayer – for use in this course. ***Motion passed by the committee.***
- 4) Math 213 Textbook: Ullom reported on his examination of the sixth edition of *Discrete Mathematics and Its Applications* by Rosen. Math 213 will use this text. ***Motion to use the new edition was passed by the committee.***
- 5) Linear Algebra Texts: Muncaster reported on his examination of the text *Applied Linear Algebra* by Olver and Shakiban. He recommends its use for the proposed “applied” version of Math 415.
- 6) Linear Algebra Syllabi: Robinson handed out a revised version of the proposed syllabus for the “pure math” version of Math 415.

The next UAC meeting is scheduled for Tuesday, November 14, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

**Undergraduate Affairs Committee
Department of Mathematics
University of Illinois at Urbana-Champaign**

Tuesday, November 28, 2006 - Minutes

Committee members present: Derek Robinson (*Chair*), Robert Bauer, Kevin Ford, Rick Gorvett, Marc Harper, A.J. Hildebrand, Heather Johnson, Randy McCarthy (*ex of*), Robert Muncaster (*ex of*)

Committee members absent: Sergei Ivanov, Stephen Ullom

Meeting start: 2:00 pm Meeting end: 3:01 pm Location: 331 Altgeld Hall

Minutes from the November 14 meeting were amended and approved.

The following items were considered and discussed:

- 1) Math 415: Muncaster presented a proposed syllabus and textbook for an “applied” (e.g., for engineering students) version of Linear Algebra. He will consider asking someone to use this syllabus and text as a test case in an upcoming section of Math 415.
- 2) Calculus Textbook: Muncaster reported on, and the UAC discussed, the recommendations of the calculus textbook committee.

The next UAC meeting is scheduled for Tuesday, December 5, at 2 pm.

Respectfully submitted,

Rick Gorvett, secretary, UAC

