



College of
Arts and Sciences
UNIVERSITY of ST. THOMAS

Fall 2007

Sines of Times

Newsletter of the Department of Mathematics
<http://www.stthomas.edu/mathematics/>

From the Chair by Dr. John Kemper

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New Course/Changes in the MATH Curriculum

Students may already have noticed that there is a new course on the spring schedule, MATH 240, Linear Algebra. Linear Algebra is an important foundational subject for any program in mathematics and the faculty of the department felt strongly that a full course was needed to present both the theoretical and applied aspects of basic linear algebra in a way that was meaningful and would serve students well in future courses and careers. Please see the article on MATH 240 by Professor Brenda Kroschel, who will teach the inaugural section of that course in the spring.

Students may also see, in the online catalog, that there have been some changes in the requirements for both ACSC and MATH majors, including students in mathematics education (see article on p. 2). Of course, any current major in mathematics or actuarial science is free to complete their major requirements according to the 'old' major field program, but, after next spring, all newly declared majors will follow the new program. Majors or prospective majors should confer with their department advisor, or with me, if they have any questions.

Along with the specific changes mentioned above, the department has added, to the catalog descriptions of all courses, information on when courses are scheduled to be offered. For example, many courses are offered "every semester" while a certain advanced course might be offered only in "spring of even-numbered years". This schedule information is intended to help students with their long-range planning. Keep in mind that the administration may require that we cancel a particular course if its enrollment is too low.

Finally, I want to encourage all students who are considering more courses in mathematics and/or actuarial science to be sure to discuss their plans with an advisor or faculty member in the department. Whether a student is interested in a major or minor in our department or simply wants to include courses that support other majors or prepare them to use mathematics in a career, every faculty member in the department will be happy to talk about the ways that a student can best achieve her or his goals.

Best wishes in all of your studies,

John T. Kemper

Actuarial Science Program News

by Director, Dr. Heekyung Youn
hkyoun@stthomas.edu, 651-962-5538, OSS 211

The summer of 2007 was record setting for our program! We had 19 students working as interns for various companies. Of these 19 positions, seventeen were actuarial and two were non-actuarial. Congratulations to all of you! Now is the time to gear up for the summer of 2008. Don't forget to attend the November 14th Job Fair at the U of MN. Information is posted on the department bulletin boards and website.

If you plan to major in Actuarial Science and are in sophomore standing, you will need to take MATH 313, Probability, in the spring of 2008.

MATH 210, a current major requirement, will change to MATH 240, starting in spring 2008. If you have already taken MATH 210, you will not need to take MATH 240. However, if you have not yet taken MATH 210, you will need to take MATH 240. For more information on Math 240, see the articles by Dr. Kemper and Dr. Kroschel. The online version of the undergraduate catalog is current (<http://www.stthomas.edu/catalog/>).

If you are interested in an actuarial major and would like to be added to my email listserv, please send me your address.

New Course! Math 240, Linear Algebra

I am very excited to offer a new course in linear algebra in spring 2008. Register for this class and learn what matrices, linear systems, and vector spaces have to do with internet search engines and page ranking algorithms!

The course covers concepts of linear equations, matrix algebra, and determinants. In addition, we will cover vector spaces, eigenvectors/eigenvalues, orthogonality, and inner products. Throughout the course, we will learn how industrial search engines, such as Google and Yahoo, use these ideas to navigate the web and return relevant information when a search is requested.

Prerequisite is a grade of C- or better in Math 200.

Please let me know if there are any questions about this new course. Dr. Brenda Kroschel, btkroschel@stthomas.edu, 651-962-5537, OSS 208

The Mathematics Resource Center (MaRC), in OSS 235, offers free tutoring help to Math 100 through 200 students.

Director: Brenda Tiefenbruck,
bftiefenbruc@stthomas.edu,
651-962-5529, OSS 233



Mathematics Teacher Preparation

Any students interested in a Math Education major (5-12), a Math specialization for Elementary Education, or Science and Mathematics for Elementary Education (SMEE) should meet with Dr. Lisa Rezac, lmrezac@stthomas.edu, 651-962-5557, OSS 205.

There have been changes in the Math curriculum and scheduling, which should be considered.

Note: The online version of the undergraduate catalog is more up-to-date than the printed version. <http://www.stthomas.edu/catalog/>

Math and Actuarial Science Club

<http://www.stthomas.edu/mathematics/masc/>

It's been a great year for club members. We have shared service activities, fun events, and gained some incredibly useful career preparation information. There will be one more meeting this semester (T, Nov. 13, 11:45, OWS 250). Pizza will be provided. T-shirts for sale!

If you haven't attended a meeting yet, please do. Contact any officer for more information.

President: Kevin Landwehr
Vice President: Trevor Soupir
Secretary: Shauna Thompson
Treasurer: Tim Mullee
Webmaster: Allison Liebl
Faculty Advisor: Lisa Rezac

Math Competitions

<http://www.stthomas.edu/mathematics/competitions/>

Putnam: Saturday, December 7, 2007, UST
Konhauser: Saturday, February 24, 2008,
Macalester College

Explore the fascinating history of these events through the website links.

To register, or for more information, contact Dr. Kurt Scholz, k9scholz@stthomas.edu, 651-962-5533, OSS 218

Seminar Schedule* (through end of semester)

CAM Colloquia

Coordinator: Dr. Pat Van Fleet, pjvanfleet@stthomas.edu, 651-962-5552, OSS 224

OWS 150, 3:00 p.m., refreshments at 2:45

November 14, 2007, Wednesday

Mathematical Aspects of Software Engineering

Pat Moberg, BAE Systems

December 5, 2007, Wednesday

Modeling the Mechanics of Living Organism

Magda Stolarska, Mathematics, UST

Applied Probability and Statistics

Coordinator: Dr. Arkady Shemyakin, a9shemyakin@stthomas.edu, 651-962-5522, OSS 221

Refreshments served. Please RSVP to Shemyakin.

OSS 225, overflow in OSS 226

November 19, 2007, Friday, 3:00-4:00 p.m.

Elementary Teachers' Conceptions of Graphical Representations of Categorical Data

Brenda Tiefenbruck, Mathematics, UST

December 7, 2007, Friday, 3:00-3:30 p.m.

Dilution Effects of Executive Stock Option Awards

Palahela Dayananda and John Kemper, Mathematics, UST

December 7, 2007, Friday, 3:30-4:00 p.m.

Challenges of Community-oriented Projects in Statistics

Arkady Shemyakin, Mathematics, UST

*Seminars sponsored by the

Center for Applied Mathematics

<http://cam.mathlab.stthomas.edu/>

Director: Dr. Pat Van Fleet, pjvanfleet@stthomas.edu, 651-962-5552, OSS 224

Administrator: Dedrick Mays, ddmays@stthomas.edu, 651-962-5524, OSS 225

UST Mission: Inspired by Catholic intellectual tradition, the University of St. Thomas educates students to be morally responsible leaders who think critically, act wisely, and work skillfully to advance the common good.