Department of Mathematics

2011 - Summer semester

I. GRADUATE COURSE CATALOG

II. GRADUATE COURSE SUMMER 2011

SENIOR UNDERGRADUATE COURSES

Math 4377 - Section# 11988- Advanced linear algebra I - (06/06/2011 - 07/05/2011) - by M. Ru

Math 4378 - Section# 13969 - Advanced linear algebra II - (07/11/2011 - 08/08/2011) - by Z. Zhang

GRADUATE ONLINE COURSES

Math 5310 - Section# 18660 - History of Mathematics - (07/11/2011 - 08/08/2011) - by S. Ji

Math 5333 - Section# 11993 - Analysis - (06/06/2011 - 07/05/201) - by G. Etgen

Math 5336 - Section# 12567 - Discrete mathematics - (06/06/2011 - 07/05/2011) - by K. Kaiser

Math 5350 - Section# 18662 - Differential geometry - (06/06/2011 - 07/05/2011) - by M. Ru

Math 5382 - Section# 17263 - Probabilities - (05/31/2011 - 08/09/2011) - by C. Peters

Math 5397 - Section# 18748 - Math Classroom Technology - (07/11/2011 - 08/08/2011) - by A. Torok

III. HOW TO REGISTER COURSES

1. Log in to My UH (People Soft)
2. Select "UH Self-Service"
3. Select "Enrollment"
4. Select "Enrollment: add classes" and choose the semester in which you would like to be enrolled.
5. Enter the specific section number for the class.
6. Continue to add more courses if needed and continue to finish the enrollment process.

IV. ARCHIVE OF PREVIOUS COURSES

SENIOR UNDERGRADUATE COURSES

Math 4377 Advanced linear algebra I - (06/06/2011 - 07/05/2011) - (Section# 11988)

Time:	MoTuWeThFr 10:00AM - 12:00PM - **Room:** SEC 203
Instructor:	M. Ru
Prerequisites:	Math 2331 and minimum 3 hours of 3000 level mathematics.
Text(s):	Linear Algebra, 4th edition, by Friedberg, Insel, and Spence, ISBN 0-13-008451-4
Description:	Instructor will cover up to Chapter 4 (determinant). Topics covered include linear systems of equations, vector spaces, linear transformation, and matrices.

Math 4378 Advanced linear algebra II - (07/11/2011 - 08/08/2011) - (Section# 13969)

Time:	MoTuWeThFr 10:00AM - 12:00PM - **Room:** SEC 203
Instructor:	Z. Zhang
Prerequisites:	Math 4377 or consent of the instructor
Text(s):	Linear Algebra, 4th edition, by Friedberg, Insel, and Spence, ISBN 0-13-008451-4
Description:	This is the second part of advanced linear algebra. The instructor will cover Sections 5-7 of the textbook. Topics include eigenvalues and eigenvectors, diagonalization, inner product space, and canonical forms.

GRADUATE ONLINE COURSES

Math 5310 History of Mathematics (07/11/2011 - 08/08/2011) - (Section# 18660)

Time:	Arrange (online course)
Instructor:	S. Ji

Prerequisites:	Graduate standing
Text(s):	Victor Katz, A History of Mathematics: An Introduction, 3rd (or 2nd Ed.), Addison-Wesley, 2009 (or 1998), and lecture notes.

Description:

This course is designed to provide a college-level experience in history of mathematics. Students will understand some critical historical mathematics events, such as creation of classical Greek mathematics, and development of calculus; recognize notable mathematicians and the impact of their discoveries, such as Fermat, Descartes, Newton and Leibniz, Euler and Gauss; understand the development of certain mathematical topics, such as Pythagoras theorem, the real number theory and calculus.

Aims of the course: To help students
to understand the history of mathematics;
to attain an orientation in the history and philosophy of mathematics;
to gain an appreciation for our ancestor's effort and great contribution;
to gain an appreciation for the current state of mathematics;
to obtain inspiration for mathematical education,
and to obtain inspiration for further development of mathematics.

On-line course is taught through Blackboard Vista, visit http://www.uh.edu/webct/ for information on obtaining ID and password.

The course will be based on my notes. The textbook is used for extra reading, do homework or do project.

In each week, from Monday to Thursday, two chapters of my notes will be posted per day in Blackboard Vista. Daily homework and reading assignment may be posted in Blackboard Vista, including projects(essays).

In each week, turn all your homework once by Sunday midnight through Blackboard Vista.

All homework, essays or exam paper, handwriting or typed, should be turned into PDF files and be submitted through Blackboard Vista. (In case you are in the campus, you could submit directly to my mailbox in the math department).

There is one final exam in multiple choice.

Grading: 30% homework, 50% projects, 20 % Final exam.

 Math 5333 Analysis - (06/06/2011 - 07/05/201) - (Section# 11993)

Time: Arrange (online course)

Instructor: G. Etgen

Prerequisites:

Text(s):

Description:

Math 5336 Discrete Mathematics - (06/06/2011 - 07/05/2011) - (Section# 12567)

Time: Arrange (online course)

Instructor: K. Kaiser

Prerequisites:

Text(s):

Description:

Math 5350 Differential Geometry - (06/06/2011 - 07/05/2011) - (Section# 18662)

Time: Arrange (online course)

Instructor: M. Ru

Prerequisites: Consent of instructor

Text(s):   A set of notes will be written and distributed by Dr. Ru.

Description: The course will be an introduction to the study of Differential Geometry-one of the classical (and also one of the more appealing) subjects of modern mathematics. We will primarily concerned with curves in the plane and in 3-space, and with surfaces in 3-space. We will use multi-variable calculus, linear algebra, and ordinary differential equations to study the geometry of curves and surfaces in R3. Topics include: Curves in the plane and in 3-space, curvature, Frenet frame, surfaces in 3-space, the first and second fundamental form, curvatures of surfaces, Gauss's theorem egrigium, Gauss-Bonnet theorem, minimal surfaces.

Math 5382 Probabilities - (05/31/2011 - 08/09/2011) - (Section# 17263)

Time: Arrange (online course)

Instructor: C. Peters

Prerequisites:

Text(s):

Description:

Math 5397 Math Classroom Technology - (07/11/2011 - 08/08/2011) - (Section# 18748)

Time: Arrange (online course)

Instructor: A. Torok

Prerequisites: none (beyond familiarity with computers)

               No textbook is required. Material will be available on the web.

Text(s):   The software that will be discussed include Mathematica, octave (the free version of Matlab) and Geometer's Sketchpad. Instructions about installing them will be posted in advance: see the course web-page, under Teaching at www.math.uh.edu/~torok.

Description: The purpose of the course is to introduce software that can be used for teaching mathematics. Descriptions and examples will be posted on-line, followed by assignments aimed at classroom applications.