Contemporary Mathematics

Math 105   Natural Sciences 112   Tu, Th 1:00 – 2:15 pm

Instructor: Dr. Grzegorz Kubicki, Department of Mathematics, NS 227,
          Telephone: 852-6196, e-mail: gkubicki@louisville.edu

Office Hours: Tu Th 12:00 – 12:50; other times by appointment

CLASS STRUCTURE: Lectures 1:00 – 2:15 in NS 112

Recitations:

Section	Time	Days	Room	Instructor
105 – 01	2:00 – 2:50 pm	W	NS 212 F	Vicki Searl
105 – 02	2:00 – 2:50 pm	W	NS 110	Jordan Bennett
105 – 03	**3:00 – 3:50 pm**	**W**	**NS 110**	**Jacob Townson**
105 – 04	3:00 – 3:50 pm	W	NS 212 C	Jordan Bennett
105 – 05	4:00 – 4:50 pm	W	NS 212 C	Vicki Searl
105 – 06	4:00 – 4:50 pm	W	NS 110	Jacob Townson

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Text: "Topics in Contemporary Mathematics" by Wiley Williams, 6rd edition, Kendall/Hunt Publishing Co.

Prerequisites: Appropriate placement score or equivalent coursework.

Material Covered: We will study Interest, Periodic Payments, Voting Theory, and Apportionment. These topics show different ways in which mathematics is applied to solve concrete problems in the modern world. The topics we discuss do not require sophisticated mathematical prerequisites by college standards. We will use algebra to solve specific real world problems. You will need to think clearly and logically about the topics and work at understanding them.

Calculators: Students are expected to have and be able to use a calculator with algebraic logic (usually indicated by parentheses keys), an exponential key (exp, ^, or x^y), and a logarithmic key (log, ln, INV exp). For example, TI 30X IIS is sufficient and inexpensive. However, any such scientific calculator will suffice. You **cannot** use cell phone calculators!

Coursework and Grading

Grading: grades for this course will be based upon total points earned from four exams, five quizzes and two projects.

Exams	400	(100 points each exam)
Quizzes	100	(best four out of five, 25 points each)
Projects	70	(35 points each project)
Attendance/participation	30	

Out of the total 600 points you will need:

580 points for A+,	540 points for A,	530 points for A-,
520 points for B+,	480 points for B,	470 points for B-,
460 points for C+,	420 points for C,	410 points for C-,
400 points for D+,	360 points for D,	350 points for D-.

Projects: two projects will be assigned according to the attached schedule. Each project is worth 35 points (30 points for merit, 5 points for neatness).

Homework: A list of homework problems is listed on the schedule. This homework **will not** be collected. Opportunities to ask questions about the homework will be given during recitation sessions. Make an effort to do as many homework problems as possible (even more than just assigned).

Exams: There will be four 100-point exams given according to the attached schedule.

The final exam is **not given** in this class. However:

(1)   If you have missed one exam you can have a make-up on that one test during the final exam day.
(2)   If you have taken all exams during the semester, you may retake any one of them. The grade on the make-up will replace the original test grade.

On the last page you will find a schedule of the course with all quizzes, exams, and project due dates listed. I recommend printing the last page and keeping it with your notes.

Some changes might occur during the semester and they will be announced in class.

This course fulfills the General Education Requirements at U of L in the area of Mathematics.
This course (3 hours in Mathematics) is concerned with solving real-world problems through mathematical methods. Students who satisfy this requirement will demonstrate that they are able to do all of the following:
1. Represent mathematical information symbolically, visually, and numerically;
2. Use arithmetic, algebraic, and geometric models to solve problems;
3. Interpret mathematical models, such as formulas, graphs, and tables;
4. Estimate and check answers to mathematical problems, determining reasonableness; alternatives; and correctness and completeness of solutions.

Title IX/Clery Act Notification

Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies. Students experiencing such behavior may obtain **confidential** support from the PEACC Program (852-2663), Counseling Center (852-6585), and Campus Health Services (852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (852-5787) or University of Louisville Police (852-6111).

Disclosure to **University faculty or instructors** of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a campus visitor or University student or employee (whether current or former) is **not confidential** under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University's Title IX officer.

For more information, see the Sexual Misconduct Resource Guide (http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure).

MATH 105
Schedule of the Course and Practice Homework

DAY	SECTIONS	PROBLEMS
Tu, Jan 09 W, Jan 10 Th, Jan 11	1.1, 1.2 Recitation 1.2, 1.3	1.1 odds 1 – 15, 25, 27,29,31,33 1.2 # 1, 3, 5, 11,12,14,17 1.3 # 1, 5, 7, 9,11,13,15,17
Tu, Jan 16 W, Jan 17 Th, Jan 18	1.3, 1.4 **Quiz 1 (Recitation)** 1.4, 1.5	1.4 # 1, 5, 13, 15, 17,21,23 1.5 # 1,7,9,11,13,15,17
Tu, Jan 23 W, Jan 24 Th, Jan 25	1.6 Recitation **1.7**	1.6 #1,3,7,9,11,15,17,19 1.7 # 1,3,5,11,13,17,19,21
Tu, Jan 30 W, Jan 31 Th, Feb 01	1,8 **Quiz 2 (Recitation)** **2.1**	1.8 # 1,3,9, 11,13,15,21, 23 2,1. Odds 1-17
Tu Feb 06 W, Feb 07 Th, Feb 08	Review **Exam 1 (Recitation)** 2.2	page 63 # 1-17 2.2 odds 3-19
Tu, Feb 13 W, Feb 14 Th, Feb 15	2.3 **Project 1 Due (Recitation)** 2.4	2.3 # 1,3,9,11,13,15, 19,21 2.4 # 1,3,13,15,17,19,23,25
Tu, Feb 20 W, Feb 21 Th, Feb 22	2.5, 2.6 **Quiz 3 (Recitation)** 2.6, 2.7	2.5 # 1,2, 5,7ab 2.6 odds 1-15 2.7 odds 1-9;
Tu, Feb 27 W, Feb 28 Th, Mar 01	Review **Exam 2 (Recitation)** 4.1	page 121 # 1-11; 4.1 odds 1-17
Tu, Mar 06 W, Mar 07 Th, Mar 08	4.1 **Project 2 Due (Recitation)** 4.2	 4.2 odds 1-17
Tu, Mar 20 W, Mar 21 Th, Mar 22	4.2 , 4.3 **Quiz 4 (Recitation)** 4.3	 4.3 odds 1-15
Tu, Mar 27 W, Mar 28 Th, Mar 29	Review **Exam 3 (Recitation)** 4,4	page 287 # 1-6 4.4 # 1,3,11,13,15,17,19,21
Tu, Apr 03 W, Apr 04 Th, Apr 05	4.4, 4.5 Recitation 4.5	4.5 # 1, 3, 5, 13,15 4.5 # 17,19, 21
Tu, Apr 10 W, Apr 11 Th, Apr 12	4,6 **Quiz 5 (Recitation)** 4.6, 4.7	4.6 # 1, 7, 9,11,13,15 4.7 # 1-5,7,9,15,19,21
Tu, Apr 17 W, Apr 18 Th, Apr 19	4.7, Review Review **Exam 4 (Lecture)**	page 287 #7-16
Tuesday, May 1 2:30 pm	**Make up exams (optional)**	