

MATH 105 Introduction to Contemporary Mathematics (4 Credits)

Western Oregon University Fall 2008

Math and Nursing Building, Room 110 Mon/Wed, Noon to 1:50

Instructor: Karen Brown

Office: Natural Science 213

Phone: (503) 838-8265

Office Hours: Mon., Wed., 8:00 to 9:00 AM, 11:00 to Noon; Tuesday 8:00 to 9:00 AM, or by appointment

www.wou.edu/~brownk

Check website for notes, extra credit opportunities, answers, etc. When sending email, please reference your

Email: brownk@wou.edu

class **in the subject:** i.e. "Math 105, MW Noon"

Text: Students purchase Math 105 packet for Spencer at the book store.

Materials Needed: Paper, pencil, graphing calculator (TI-83 Plus will be used as presentation model), graph paper

Course Description: "Use of mathematical problem solving activities from real world situations designed to convey the application of mathematics.

Extensive use of computer and graphics calculator required." The class is intended only for those students obtaining a B.A. degree. (WOU 2008-09 Catalog, page 140.)

This course will include topics in descriptive and inferential statistics, probability, consumer buying, savings and loans, voting systems and apportionment, graphic calculators and computers. **A TI-83 or TI 84 graphing calculator is highly recommended.** Emphasis will be placed on mathematical reasoning rather than on mathematics instruction. Grades will be determined on the basis of percentage of total points possible.

Grading: The course is based on the following point system:

Activity		Total Points	Percent of Grade
Attendance	5 point per day	100	10
Assignments	4 @ 25 points each	100	10
Labs	10 @ 15 points each	150	15
Quizzes	2 @ 50 points each	100	10
Midterm Exam	1 @ 150 points	150	15
Group Project		150	15
Final Exam		250	25
Total		1000	100

Late work may be subject to point penalty

Grade scale:

Percent	Letter Grade	Percent	Letter Grade
100-93	A	73-76.9	C
90-92.9	A—	68-72.9	C—
87-89.9	B+	65-67.9	D+
83-86.9	B	58-64.9	D
80-82.9	B—	55-57.9	D—
77-79.9	C+	0-54.9	F

Group Project: You will work in teams of two. Your team will prepare a written report on either the topic of “Apportionment and the National Census”, or “Buying a House”. An outline for the report is given in your packet and will be discussed in class. Be sure to include graphs and/or charts with explanations. The paper should be typed and at least 1000 words. All reports will be due on Wednesday, December 3.

Suggestions:

1. Math is not a spectator sport. You must actively study to be successful.
2. Show all work in an organized manner including a statement of the problem.
3. Do the assigned homework.
4. Ask yourself why? when solving problems.
5. Verify all solutions. (that’s where the calculator comes in handy)
6. Take notes in class and ponder concepts.
7. Participate in class. Get involved. Ask questions. Math can be exciting and rewarding.
8. You are responsible for any changes initiated in class.

Tentative Class Schedule

Date	Topic	Class Activity
9/29	Organizing Data & Applications	Assignment #1 (1,2)
	Comparisons & Applications	Lab 1
10/1	Enhancements etc.	
	Mean, Median, Mode, etc.	Lab 2
10/6	Scatterplots, Line of Best Fit	Lab 3
10/8	Measures of Variability	Assignment #1 (3-7)
	Normal Distributions	
10/13	Technology	Lab 4
10/15	No class	
10/20	Review for midterm exam	Lab 5; Assignment #1 due—25 points
10/22	Midterm Exam over Unit 1 (150 points)	
	Computing Probability	Assignment #2 (1-7)
10/27	Advanced Probability	Assignment #2 (8-10)
	Probability	Lab 6
10/29	More Probability	Assignment #2 (11-13)
11/3	Permutations and combinations	Assignment #2 (14-15)
11/5	Special Probabilities	Lab 7; Assignment #2 due—25 points
11/10	Review and Quiz over Unit 2 (50 points)	
11/12	Simple and compound Interest	Assignment #3 (1-4)
	Compound Savings	
11/17	Amortized Loans	Lab 8; Assignment #3 (5-12)
11/19	Buying a House	Lab 9; Assignment #3 (13-19)
11/24	Annuities	Lab 10; Assignment #3 Due—25 points
11/26	Take Home Quiz over Unit 3 (50 points) – due on Mon 12/1	
12/1	Apportionment Methods	Assignment #4 (1-14)
12/3B	Apportionment & Review	Project due; Assignment 4 Due—25 points
12/8	Final Exam Noon to 2 PM MNB 110 Comprehensive (250 points)	

Below is some collected information from Western Oregon University Catalog, 2008-2009. These are included here because they are important to your success in this class. Each excerpt is noted with the page on which it appears in the catalog.

Fall term Calendar (inside front cover)

Classes begin	Monday, September 29
Fee payment & add/drop begin	Monday, September 29
Last day to pay fees without penalty	Friday, September 26
Last day to add courses, change grade options, elect graduate/undergraduate credit or pay fees	Friday, October 10
Last day to drop courses	Friday, November 7
Registration for next term	Monday, Nov. 17 - Friday, Nov. 21
Thanksgiving Day Holidays	Thursday-Friday, November 27-28
Final examination week	Monday, Dec. 8 - Friday, Dec. 12
Fall term ends	Friday, December 12

University Mission Statement

Western Oregon University is a comprehensive university that creates personalized learning opportunities, supports the advancement of knowledge for the public good and maximizes individual and professional development. Our environment is open to the exchange of ideas, where discovery, creativity and critical thinking flourish, and students succeed. (p. 3)

College of Liberal Arts and Sciences
Dean Stephen Scheck

Mission Statement

The College of Liberal Arts and Sciences provides the central learning experience for all undergraduate students at Western Oregon University. The faculty are committed to engaging students in academic discovery and intellectual growth via the core curriculum, major and minor baccalaureate curricula, and mastery in select graduate programs.

Program Objectives

1. Engage students in scholarly pursuits that benefit their preparation for life-long learning and societal engagement.
2. Provide an environment where students may develop disciplinary competencies necessary for their chosen career fields.
3. Provide opportunities for faculty-student mentoring and out-of-classroom learning opportunities.

For more information, see the Web site at: www.wou.edu/las. (p. 37)

Natural Sciences and Mathematics Division of the College of LAS
Division Chair Steve Taylor

The Natural Sciences and Mathematics Division is responsible for majors and minors in biology, chemistry, Earth science, integrated science, mathematics and natural science.

Mission

To offer quality liberal arts education in Biology, Chemistry, Earth Science, Mathematics, Physics and Pre-Professional Studies. Our students have the opportunity to acquire and assimilate mathematical and scientific knowledge, that they may broaden and refine their understanding of the ever-changing world around them, both while at Western Oregon University and throughout their lives.

Program Objectives

1. To help students internalize and apply both the scientific method and major scientific and mathematical concepts and principles.
2. To enhance students' reasoning and problem solving skills.
3. To improve students' individual and collaborative skills in preparation for the global scientific and mathematical challenges of the 21st century. More detailed program information, including program admission requirements can be obtained by contacting the division at: 503-838-8206, or on the Web at

www.wou.edu/las/natsci_math/nsmdiv.html.

(p. 38)

Institutional aspirations for learning

Students at WOU will be challenged to achieve their highest potential through a rigorous and stimulating curriculum. Between 2004 and 2005, a set of educational goals called Institutional Aspirations for Learning were collaboratively developed by our faculty after focused discussions about the fundamental aims of liberal education in the 21st century. These aspirations constitute the core competencies, skills, experiences and values credited to, and expected of, WOU's educational process and its graduates. We believe that these aspirations are the basic building blocks of a high-quality education as well as the foundations for productive careers, life long development and informed citizenship on a local, national and global level.

1. Students will develop more refined critical thinking skills, including advanced analytical, logical and quantitative reasoning abilities as well as excellent problem-solving skills.
2. Students will develop effective communicative abilities, including listening, observing, speaking, writing and dialoguing.
3. Students will become active readers with an enhanced ability to carefully, closely and thoughtfully read a range of texts.
4. Students will acquire field or discipline specific knowledge and they will understand disciplinary modes of intellectual inquiry.
5. Students will develop an interdisciplinary and integrative perspective as they recognize, explore, appreciate and engage the interconnections between disciplines.
6. Students will develop advanced research abilities and they will demonstrate improvements in their information and media literacy.
7. Students will learn how to use appropriate technologies.
8. Students will acquire and demonstrate competencies, skills, attributes and values necessary for successful participation in a diverse, pluralistic and increasingly interdependent world.
9. Students will be able to work effectively in teams.
10. Students will strive to be well-balanced persons capable of making thoughtful and healthy choices.
11. Students will be able to apply theory in relevant, appropriate and reflective ways. (p. 6)

Disability Services

Director Malissa Larson

The Office of Disability Services facilitates appropriate accommodations on campus for students and visitors with disabilities. Services provided by the office help ensure that students with disabilities are able to participate fully in all of WOU's programs and activities. The needs of each student who has a disability are assessed on an individual basis so that each receives the most appropriate accommodations and/or support. The following list of services provided by the Office of Disability Services are the most commonly requested:

- Accessibility assistance: wheelchair accessibility to buildings and campus grounds, communication equipment (FM systems, audio-looped rooms, TTYs, closed caption decoders, amplified phones), CC-TV, Braille, scanner, voice output computer access and other technical equipment
- Accessibility aides: note takers, readers, transcribers, classroom assistants, exam proctors
- Advising: academic, career, personal/social
- Advocacy: for appropriate accommodations, alternative testing, preferred accessibility aid
- Communication aides: Sign language interpreters who use student's preferred signed communication mode (from ASL to MCE), and oral interpreters are provided upon request for classes, school sponsored activities, and meetings with faculty and staff
- Empowerment: Through networking groups, workshops and interaction with the office staff, students learn of their rights and how to obtain services they need.
- Leisure and social activities: Accessibility assistance and aids are provided to encourage and support the students' full participation in all parts of campus life.
- On-campus housing: accessible to deaf, hard of hearing, blind students and students using wheelchairs or other assistive mobility aids
- Orientation: to the campus and services provided by the Office of Disability Services as well as general university services available

Please contact the Office of Disability Services for more information at 503-838-8250 V/TTY or e-mail ods@wou.edu. (p. 30)

Academic Advising and Learning Center

Director Karen Sullivan-Vance

Academic Advising Center

Academic advising at WOU is a developmental process designed to help students define their life and career values and goals in relation to their academic plan. Both the student and adviser have a shared responsibility in the ongoing dialogue that helps students maximize their educational experience at WOU. All undergraduate students are required to meet with their academic adviser at least once a term until a degree plan is filed with the Registrar's Office. Students are encouraged to meet with their adviser when they have questions about their educational goals. Students have access to faculty advisers in their major and minor areas of study. In addition, the Academic Advising and Learning Center's professional advisers can advise students about requirements, along with pre-education and undecided students.

The Academic Advising and Learning Center works with:

- Students to identify their life and career goals in relation to possible academic programs
- Undecided students who are exploring different majors
- Students transferring into WOU from another institution
- Students on academic warning, probation or suspension
- Academic requirements for graduation, including the Liberal Arts Core Curriculum (LACC)

For more information, call 503-838-8428 V/TTY, e-mail advising@wou.edu or go to the Web page www.wou.edu/advising.

Learning Center

Academic skills, including study skills and time management, are essential for college success. The Learning Center helps students assess their current academic skills and develop new skills to help them become successful. Services are provided to WOU students at no charge.

Services at the Learning Center include:

- Peer tutoring in most academic subjects by appointment
- Drop-in math tutoring hours
- Tutor-assisted study groups
- Individual study skills assessment and assistance (time management, test taking, note taking, listening, textbook reading, etc.)
- Student computer lab

Tutoring assistance is offered in most academic subjects by peer tutors who have been recommended by faculty. The tutor's goal is to help students improve their knowledge and develop better study habits. Students must be currently enrolled in the requested class at WOU for tutoring. For more information, call 503-838-8501, (503-838-8428 TTY), or go to the web page www.wou.edu/learning. (p. 39)

Standards of Conduct

The following list of prohibited forms of conduct is not all inclusive since it is not possible to list all potential violations.

1. Academic Dishonesty, which includes but is not limited to:
 - a. *Cheating* - intentional use, or attempted use of artifice, deception, fraud, and/or misrepresentation of one's academic work;
 - b. *Fabrication* - unauthorized falsification and/or invention of any information or citation in any academic exercise;
 - c. *Facilitating dishonesty* - helping or attempting to help another person commit an act of academic dishonesty. This includes students who substitute for other persons in examinations or represent as their own papers, reports, or any other academic work of others;
 - d. *Plagiarism* - representing without giving credit the words, data, or ideas of another person as one's own work in any academic exercise. This includes submitting, in whole or in part, prewritten term papers of another or the research of another, including but not limited to the product of commercial vendors who sell or distribute such materials, and the appropriation and/or use of electronic data of another person or persons as one's own, or using such data without giving proper credit for it; or
 - e. *Any use or attempted use of electronic devices* in gaining an illegal advantage in academic work in which the use of these devices is prohibited, and such devices include but are not limited to cell phones, PDAs, laptops, programmable calculators, removable disk drives, etc. (p. 30-31)

Statement on discrimination, including sexual harassment

Western Oregon University is committed to cultivating an educational and work environment in which all individuals are treated with respect and dignity. Each individual has the right to learn and work in an atmosphere that promotes equal educational and employment opportunities and prohibits discriminatory practices, including harassment. Western Oregon University expects relationships across campus will be free from bias, prejudice and harassment.

This policy statement is intended to reaffirm Western Oregon University's prohibition against discrimination and harassment, clarify types of prohibited conduct, and provide an effective complaint procedure to individuals who believe they have observed or have been subject to prohibited conduct.

Discrimination

Discrimination, for the purposes of this policy, is defined as any act or practice, in form or operation, whether intended or unintended, that unreasonably differentiates among persons on the basis of race, color, religion, national origin, age, sex, marital status, sexual orientation, veteran status or disability or any other status protected under the law.

Harassment

Harassment, for the purposes of this policy, is defined as conduct that creates an intimidating, hostile, or degrading environment that would interfere with the work or academic performance of a reasonable person of the complainant's protected status.

Sexual Harassment

Sexual Harassment, whether or not it be by direct physical attack, as defined below. Sexual harassment includes, but is not limited to, sexual advances, requests or suggestions to engage in sexual conduct, and other physical and expressive behavior of a sexual

- nature when:
- Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, grade, or used as a basis for any employment or academic decision; or
 - Such conduct is unwelcome and has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creates an intimidating, hostile or offensive work or academic environment..

Additional information is available at

www.wou.edu/sexualharassment.

To request a complete hard copy of the discrimination and harassment policy and complaint procedure; to discuss a sexual harassment, harassment or discrimination concern; or to file a sexual harassment, harassment or discrimination complaint, contact udy Vanderburg at 503-838-8131 or vanderj@wou.edu.

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