MATH 260 – Sets & Logic – FALL 2008

Your Prof: James D. Harper, Ph.D. **Office:** 107C Bouillon
My Phone: (963) 2402 **e-mail:** harperj@cwu.edu

Office Hours

Monday, Wednesday, Friday	9:00 to 10:00
Tuesday, Thursday	11:00 to Noon

And by appointment.

Text Logic, Sets & Proof: An Introduction, by James D. Harper

N.B., Your professor will not receive *one red cent* from this in-house publication.

Syllabus Selections from chapters 1 through 6.

Grading System

Attendance 3%

Attendance will be taken daily except on exam and review days.
You will be allowed up to *five* absences without affecting your attendance score. More than 14 absences will result in a "0" for your attendance score.

Homework 6%

Homework will be assigned in two categories: "Turn - In" and "Self – Study". Turn in homework will be collected once each week, usually on Wednesdays. Your work will be read and commented on.

Worksheet 6%

There will be an in-class worksheet on most Fridays. It is preferred that you work in groups of two or three. Although these worksheets are a small percentage of your grade, they are an important component in the learning process. Thus, please make reasonable attempts to attend these worksheet days. Since your lowest score will be dropped, in most cases, there will be no *make-ups*. Thank-you.

Exams 60%

There will be three in-class exams for your pleasure and enjoyment. ✪
Dates will be announced.

Final Exam 25%

The Final is a comprehensive exam and it will be about 60% longer than our in-class exams.
You are invited to attend one of the following scheduled Finals.
10:00 class: Wednesday, December 10, 8:00 to 10:00
1:00 class: Thursday, December 11, Noon to 2:00

Grading Scale

A: 92% B: 82% C: 72% D: 62%
Note: A minus grade is "-3%" and a plus grade is "+3%".
E.g., 79% is a B- and 85% is a B+.

Important Dates

Veterans Day	Tuesday, November 11
Thanksgiving recess	Wednesday – Friday, November 26 - 28

Course Objectives

The primary purpose of this course is to write proofs. A *proof* is a mathematical essay that demonstrates the validity of a mathematical statement in a *clear* and *convincing* way. While some proofs are computational, such as proving that "If $x^2 - x - 6 = 0$, then $x = -2$ or $x = 3$", the emphasis of this course will be an introduction to *paragraph* proofs. As it is with any essay, mathematical or otherwise, students will be expected to use a modicum amount of English

grammar when they compose their proofs. Topics to reinforce this skill include: propositional logic, elementary set theory, functions, mathematical induction and other properties of the integers. Furthermore, every student will be expected to state and prove **The Binomial Theorem** on the Final Exam.

Comments on Homework

1. Homework scores tend to be low the first few weeks of this course. The reason for this is twofold. The first reason is that students are learning a skill different from what is expected of them in previous math courses, that is, writing proofs. The second reason is more universal: It generally takes a few weeks to determine your professor's expectations and nuances. Also, I tend to be picky, sometimes on items that you might consider to be trivial, *e.g.*, "one inch margins" or "didn't use "then" correctly".
Don't Panic! If you take good notes, read the comments that are provided for you on your HW, paper and then by midterm your scores should rise to a respectable level.

2. Ideally, homework should be done individually. However, your 260 professor understands the value of collaborative work (this is what the "worksheet" days are for) or receiving help from someone other than yours truly. All I ask of you is that you document those from whom you received assistance. In these cases please write at the beginning of your homework paper:
(i) "I received help (assistance, hints) on problem(s) _____ from _____."
or
(ii) " 'Ethan' and I worked together on problem(s) _____."

If you receive help from a tutor (private or skills center), please mention this information as well. When working with a tutor, ask this person to read your notes, related handouts and pertinent sections of the textbook.

3. Homework Extra Credit.
(i) Proof reading the textbook.
    (a) typos: 2 points.
    (b) Grammar/Spelling: 1 to 4 points.
    (c) Mathematical: 4 to 10 points.

(ii) Occasionally, I will assign an extra credit problem. You are also invited to choose a non-routine problem from the textbook or, better still, come up with your own non-routine problem.