



scott m. lewis  
 hertz 225  
 phone: 963-1803  
 fax: 963-3226  
 hours:  
 t,th -3:00pm  
 else, by appointment,  
 gleefully accepted

#### links:

[math 260 topical outline](#)

(all the bits that are fit to print)

[georg cantor](#)

[euclid's elements](#) (from clark university, worcester, massachusetts)

[general history of mathematics](#) (from trinity college, dublin)

[aristotelean logic](#)

[chronology of mathemmaticians](#) (also from clark)

of course, there are many other resources out there. find some of them and report back to me.

#### sets and logic

math 260  
 5 credits  
 hertz 119  
 mtwhf - 2:00 pm

prerequisites: math 173 (calculus ii) **or** CS 301 (data structures) and MATH 172 (calculus i) or equivalent.

#### text:

(1991). morash, ronald. bridge to advanced mathematics, second edition. cwu coursepack(reprint. courtesy of mcgraw-hill, inc.)

#### description:

since the work of david hilbert, in the early 20th century, the axiomatic method has been the very cornerstone of mathematics. this method has, through the centuries, come in and out of favor, but its roots go back to euclid's elements and beyond. now, **any** mathematics must be shown to 'fit' logically into the structure of the discipline.

this is a course about axiomatic systems and the axiomatic method. sets are the building blocks, out of which axiomatics systems are made, logic is the glue that holds them together. proof is the process by which statements about mathematical things are shown to 'fit.'

math 260, sets and logic, represents a transition to advanced mathematics -- all roads to higher mathmematics pass through this field.

there are some links in the left sidebar of this page. take the time to explore what some people in other universities are interested in. there are other possibly useful links back at my [home page](#).

this quarter we will cover the following in morash:

- o ch. 1 (sets): sec. 1.1-1.4
- o ch. 2 (introduction to logic): sec. 2.1-2.3
- o ch. 3 (introduction to proof): sec. 3.1-3.5
- o ch. 4 (methods of proof i): sec. 4.1-4.4
- o ch. 5 (methods of proof ii): sec. 5.1-5.2
- o ch. 6 (equivalence relations): sec 6.1-6.3
- o ch. 7 (functions): 7.1-7.3

check out the [class calendar](#) and the [math 260 topical outline](#) .

#### evaluation:

the bulk of your grade (95%) will be determined by two midterms (30% ea.) and a final examination (35%). the first midterm will take place (and be graded) before the deadline for dropping the class.

the remaining 5% of your grade will be based on the homework assignments i collect, the several, unannounced but straight-forward quizzes we have, and things like class participation.

if you have any questions or comments, feel free to come by my office or

e-mail me at the address below.

### **student learner outcomes**

the most important things you learn in school are not going to be measurable, sorry. in fact, the absolute best service a list of 'student learner outcomes' could possibly provide is as a random sample of behavioral objectives. that said, at the end of this course, you will have a reasonable facility (as measured by the evaluation procedures described above) in manipulating sets, creating truth tables, identifying logical forms, and constructing sound mathematical proofs with a variety of techniques. By the way, when we use the phrase 'elementary set theory' to describe this course, the word 'elementary' should not be confused with 'simple.'

### **fun with influenza**

if you have a severe respiratory or influenza-like illness (ILI) (high fever, aches, chills, cough) **you should not come to class until you are without fever for 24 hours without the aid of fever-reducing medication.** if your absences are related to a severe respiratory or flu-like illness, you will be given the opportunity to make up your assignments and class content without penalty. it is your responsibility to notify your instructor *in advance* when absent due to the flu. faculty is under no obligation to excuse class absences related to sickness. If you are pregnant, work with your instructor to prevent exposure to influenza. you should utilize the following precautions to prevent exposure:

- 1) frequent hand washing and carry a bottle of alcohol-based hand sanitizer with you at all times.**
- 2) cough etiquette (grab your shoulder and cough into your elbow).**
- 3) place used tissues immediately in the trash, followed by washing your hands.**
- 4) use [CDC](#)-approved disinfectants on shared surfaces such as doorknobs, desks, etc.**
- 5) Stay home if you have a severe respiratory or flu-like illness.**

If you are concerned you may have seasonal influenza, notify student health. plan for potential absences and assure you have access to the internet and blackboard for assignments. regardless of your flu status, you must complete the requirements of the course to receive a passing grade.

### **note**

students with disabilities who wish to set up academic adjustments in this class should give me a copy of their *confirmation of eligibility for academic adjustments* from the disability support services office so that we can meet in order to discuss how the approved adjustments will be implemented in this class. students with disabilities without this form should contact the disability support services office, bouillon 205 or [dssrecept@cwu.edu](mailto:dssrecept@cwu.edu) or 963-2171 as soon as possible.

### **no, no, no!**

no late assignments, no early tests, no late tests, no make-up tests

(including finals ... be there).



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| post no bills |

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spring 2012.



There's no place like [home](#).