## Mathematics 3810H - Ancient and classical mathematics

(Formerly Mathematics 381H) TRENT UNIVERSITY, Fall 2009

### Instructor

#### **Department of Mathematics**

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#### Prerequisite

Prerequisite: Mathematics 1100 [formerly 110] Recommended: Mathematics 2200H [formerly 220H] or Mathematics 2350H [formerly 235H] Exclusions: Mathematics 380 and Mathematics 381H

#### Text

The Historical Roots of Elementary Mathematics, by Lucas N.H. Bunt, Phillip S. Jones, & Jack D. Bedient Dover Publications, New York, 1988, ISBN 0-486-25563-8

# Meetings

Lectures: Wednesday 09:00-09:50 in ECC 208, Thursday 14:00-14:50 on BL 401, and Friday 14:00-14:50 in ECC 208

#### Marking Scheme

There will be five or six fortnightly assignments, a project (including a proposal), and a take-home final examination. The assignments will be handed out and collected every other week (usually on Fridays), the project proposal will be due on 16 October, the project itself will be due at the end of the term, and the final examination will be written during the examination period in December and will be due at its end. The final mark will be calculated as follows:

Best 4 assignments $(4 @ 10\% ea.)$	40%
Project proposal	5%
Project	25%
Final Examination	30%

Work will not normally be accepted after the due date. Students who miss a due date for reasons beyond their control should contact the instructor as soon as possible. Note that there is no attendance requirement per se, but the consequences of missing classes are ultimately your responsibility to deal with.

This scheme may be modified for students in *exceptional* circumstances. Any such modification will require the agreement of both the student and the instructor.

Please note that a deadline given in the printed version of the Academic Calendar is incorrect: students actually have until 13 November, 2009, to drop Fall term half-courses without academic penalty.

#### Content

We will survey the historical development of some important parts of mathematics. In particular, we will focus on the development of number systems and algebra, and the evolution of proofs and abstraction. In rough chronological order, we will consider mathematics in:

- 1. Prehistory (*i.e.* the speculative! origins)
- 2. Ancient Egypt and Mesopotamia
- 3. Classical Greece and Rome

Additional material may be covered on the assignments and projects.

### Honour & Help

The obligatory statement concerning **academic integrity** reads as follows:

Academic dishonesty, which includes plagiarism and cheating, is an extremely serious academic offence and carries penalties varying from a 0 grade on an assignment to expulsion from the University. Definitions, penalties, and procedures for dealing with plagiarism and cheating are set out in Trent University's Academic Integrity Policy. You have a responsibility to educate yourself – unfamiliarity with the policy is not an excuse. You are strongly encouraged to visit Trent's Academic Integrity website to learn more – www.trentu.ca/academicintegrity.

For clarity, the following guidelines will apply in MATH 3810H:

You are permitted and encouraged to work together and ask anyone willing (especially the instructor!) for explanations, hints, and suggestions on the assignments and projects, and to consult whatever sources you wish, with the exception that you may not consult anyone who has taken a similar course recently or their work. However, all work submitted for credit must be written up entirely by you (with the exception of group projects), giving due credit to all relevant sources of help and information. The take-home final exam will have more restrictive conditions that will be spelled out on the exam.

In some circumstances students may also be eligible for special help or accommodation. The obligatory statement concerning **access to instruction** reads as follows:

It is Trent University's intent to create an inclusive learning environment. If a student has a disability and/or health consideration and feels that he/she may need accommodations to succeed in this course, the student should contact the Disability Services Office (Bata Library Suite 109, 705 748-1281, disabilityservices@trentu.ca) as soon as possible.

#### Aids

Except as noted on particular questions on the assignments and final exam, and with the general restriction noted above, you may use whatever aids you wish. Note that "personal response systems" such as clickers will not be used in MATH 3810H.

# MATH 3810H Web Page

### http://www.trentu.ca/mathematics/sb/3810H/

The MATH 3810H web page include up-to-date information about the course and links to a selection of material from previous years. This year's work and handouts will be put up there as they are distributed in class, as will some other items of interest. Consult the web page if you missed a handout in class or lost it after receiving it. Note that MATH 3810H will make only minimal use of myLearningSystem (a.k.a. WebCT); the main use will be to link to the MATH 3810H home page.