



Trent University  
Computer Science 232H  
2008 Winter Term

## DIGITAL LOGIC

### Course Outline

**Instructor:** Michael Jack, *E-mail: michaeljack@trentu.ca*  
*Office: OC 102*  
*Office hours: Monday, 14:00 - 16:00.*

**Secretary:** Bonnie MacKinnon, *E-mail: compstudies@trentu.ca*  
*Office: OC 102.6, Phone: (705) 748-1011 ext.1495*

**Website:** <http://www.trentu.ca/webct>

**Texts:** M. Moris. Mano and M. D. Ciletti, Digital Design (fourth edition)  
Tessier, R. and Jack, M. Computer Science 232H Lecture Slides

### Course Description:

The purpose of this course is to provide a solid foundation in Boolean algebra, truth tables, Karnaugh maps, minimization of circuits, adders, multiplexers, flip-flops, sequential logic design and memory circuits. The investigation of digital logic circuits is intended to provide a deeper understanding of the internal workings of microprocessors and memory chips.

**Meetings:** Lectures are Monday 16:00 - 18:00 in GCS 110.  
Seminars are Monday 18:00 - 19:00 in GCS 110.

### Course Schedule:

Date	Type	Start Time	Location	Duration	Due back
January 7	Lecture 1	17:00	GCS 110	2 hrs.	
January 14	Lecture 2	17:00	GCS 110	2 hrs.	
January 21	Lecture 3	17:00	GCS 110	2 hrs.	
January 28	Lecture 4	17:00	GCS 110	2 hrs.	
February 4	Lecture 5	17:00	GCS 110	2 hrs.	Assign 1
February 11	Lecture 6	17:00	GCS 110	2 hrs.	
Reading week	-	-	-	-	
February 25	Midterm	17:00	GCS 110	2 hrs.	Assign 2
March 3	Lecture 7	17:00	GCS 110	2 hrs.	
March 10	Lecture 8	17:00	GCS 110	2 hrs.	
March 17	Lecture 9	17:00	GCS 110	2 hrs.	
March 24	Lecture 10	17:00	GCS 110	2 hrs.	Assign 3
March 31	Lecture 11	17:00	GCS 110	2 hrs.	
TBD	Final	TBD	TBD	3 hrs.	Assign 4

**Grading scheme:**

40%	4 assignments
20%	Midterm
40%	Final exam

**Examination policy:**

Midterm and final exams are open text book. The duration of the midterm is 2 hours. The duration of the final exam is 3 hours. Both exams are structured around assignment questions. The better you do on the assignments, the easier it will be for you to “ace” the exams.

No computers may be used during the exams. The only digital devices permitted are calculators and digital wristwatches. Cell phones must be turned off during the examination.

**Assignment submission policy:**

All assignments are to be submitted in class. Any assignment submitted past the due date will incur a penalty of 50%. No assignments will be accepted one week past the due date.

**Missed or Delayed Term Work:**

You are expected to complete all assignments and hand them in on time, and you are expected to write the exams at the scheduled time. If you don't hand in some term work due to illness or another legitimate reason, Michael Jack is willing to make accommodations, but only if you report the problem to Michael Jack (not anyone else) as soon as is reasonably possible. Accommodations for missed term work will be decided on a case-by-case basis; typically they will involve either accepting assignments after the due date or making changes to the weighting used to compute the course grade.

## **Academic Dishonesty:**

Academic dishonesty, which includes plagiarism and cheating, is an extremely serious academic offence and carries penalties varying from failure in an assignment to suspension from the University. Definitions, penalties, and procedures for dealing with plagiarism and cheating are set out in Trent University's Academic Dishonesty Policy which is printed in the University Calendar.

### **Get help, but do not cheat!**

You are encouraged to discuss the assignments with the instructor, lab adviser, and fellow students, since this is one of the best ways to learn the material. However, you should not let anyone solve the exercises for you. When you hand in your assignments, ask yourself two questions:

*Do I understand all the material I am handing in?  
Could I do this assignment over again without any help?*

The answer to both questions should be YES. Computers allow electronic copying of programs and documents, which makes it very easy to cheat in a course like COSC 232. If you are caught cheating you will be reported to the Dean's Office for appropriate discipline. If you cheat and don't get caught, you are still in trouble, because examination marks count more than assignments marks in your final course grade.

## **Access to Instruction:**

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 (BL Suite 109, 748-1281, [disabilityservices@trentu.ca](mailto:disabilityservices@trentu.ca)) as soon as possible. Complete text can be found under Access to Instruction in the Academic Calendar.