THE UNIVERSITY COLLEGE
OF THE CARIBOO
Computing Science
School of Advanced Technology and Mathematics

COMP213 - Introduction to Computer Systems (3,1,1) – (3 credits)

Fall 2004

Instructor: **Yanni Giftakis** **Phone/Voice-mail: 250-371-5933**
Office: **OM 2842** **E-mail:** giftakis@yahoo.com

Course Website: http://giftakis.tripod.com/
Course Network Resource: h:\comp213\ (available only from within computer labs)

Course Description

This course introduces students to the fundamentals of logic design and computer architecture. Important topics include: numbers representation, logic gates, combinational and sequential logic, main blocks of the computer: ALU, control unit, and CPU, I/O operations, interrupts and memory organization, machine and assembly languages.

Educational Objectives/Outcomes

After completing the course, the student will: understand the basic concepts of computer systems and computer architecture; become familiar with the fundamental logic used in logic circuits; experience variety in operating systems and low-level programming; and gain experience with practical, hands-on computer assembly and management.

Prerequisites

COMP123, or COMP113 with written consent of the instructor of COMP113.

Texts and Resources

Required Texts,

- Patterson, David A. and Hennessy, John L., Computer Organization and Design: The Hardware/Software Interface, 3rd Ed., Morgan Kaufman Publishers, 2005.
- Kernighan, Brian W. and Ritchie, Dennis M., The C Programming Language, 2nd Ed., Prentice Hall 1988.

Resources,

- Each student will be given a personal account on the Computing Science Linux server
- Online resources will be provided during the course, whether for exercises, assignments, or just reference.

Student Evaluation and Course Notes

Submissions*	20%
Quizzes	10%

Midterm Exam	25%
Final Exam	45%

** Submissions include Lab Results, Presented Exercises, Assignments, and Reports*

Notes on Course Success:

1. To pass the course the student must achieve a minimum of 50% overall. Also, the student must achieve minimum of 50% on the combined mid-term and final exams (minimum of 35% out of 70%).
2. All assessments given for computing courses are governed by the academic honesty policy of both the UCC and the Computing Science Department. Please see UCC calendar for the latest policy and regulations (available online at: *www.cariboo.bc.ca/policy/educ/index.html).*

Notes on Submissions:

All lab results, exercises, assignments, and reports are expected to be submitted in a professional manner. This means printed on standard, letter-size paper (8.5" x 11"), bound in a secured folder, and identified with a title page.

Submissions are expected up to the due date, but not after. Late submissions receive a mark of zero.

Notes on Attendance:

Students MUST attend every lecture and seminar. Seminars will frequently be used to present new lecture material.

COURSE TOPICS

Using the text, Computer Organization and Design, lecture material will be presented from the following areas,

1. *Introduction and Fundamentals (computer technology background and terms)*
2. *The Language of the Computer (including compiler technology)*
3. *Number Systems and Computer Arithmetic (** this topic also presented in* Discrete Mathematics*)*
4. *The Processor*
5. *Storage Technologies (Primary & Secondary)*
6. *I/O Devices and Networking Technology*

Other lecture material shall include discussions directed at seminars and labs, as well as modern and popular computer technology topics.

Seminars/Labs:

Each seminar/lab will consist of a take-home exercise, practical lab activity, or research project.

Students will also be provided access to the Computing Science Linux server, to supplement course activities.

Research:

This course covers many important and popular topics in computer technology. Students can expect assignments that require extra-class research, which is to be presented in properly prepared report form.

Quizzes and Exams:

- quizzes cover limited course topics, although announced in advance, students must be prepared
- midterm exam will cover everything to that point, and the final covers the entire course

METHODS FOR PRIOR LEARNING ASSESSMENT AND RECOGNITION

Students may receive credit for a similar course, taken at another institution, with the written consent from each of: COMP213 Instructor, Departmental Chairperson, and BTACS Advisor or B.Sc. (Major in Comp.Sc.) Advisor.

USE OF TECHNOLOGY

The Linux Operating System and C language, UCCLan (Local Area Network), and World Wide Web.

The textbook is accompanied with a CD that contains extensions to the text material.