# UNIVERSITY PATHWAY

#### Did you know?

The Information and Communications Technology Council of Canada <u>http://</u> <u>www.ictc-ctic.ca/en/</u> reports that Canadian employers will need around 126,400 to 178,800 ICT workers and this include computer programmers.

### Introduction to Computer Studies, Grade 10, Open, ICS2O

This course introduces students to computer programming. Students will:

- write computer programs
- create clear and maintainable internal documentation
- manage a computer by studying hardware configurations, software selection, operating system functions, networking, and safe computing practices
- investigate the social impact of computer technologies
- develop an understanding of environmental and ethical issues related to the use of computers.

### Introduction to Computer Science, Grade 11 University Preparation, ICS3U

This course introduces students to computer science. Students will:

- design software independently and as part of a team
- use industry-standard programming tools
- apply the software development life-cycle model
- write and use subprograms within computer programs
- develop creative solutions for various types of problems
- explore environmental and ergonomic issues, emerging research in computer science, and global career trends in computer-related fields.

## Computer Science, Grade 12 University Preparation, ICS 4U

This course enables students to further develop knowledge and skills in computer science. Students will:

- use modular design principles to create complex and fully documented programs, according to industry standards
- manage a large software development project, from planning through to project review in teams
- analyze algorithms for effectiveness
- investigate ethical issues in computing
- explore environmental issues, emerging technologies, areas of research in computer science, and careers in the field.



### Introduction to Computer Programming, Grade 11 College Preparation, ICS3C

This course introduces students to computer programming concepts and practices. Students will:

- write and test computer programs, using various problem-solving strategies
- learn the fundamentals of program design and apply a software development life-cycle model to a software development project
- learn about computer environments and systems
- explore environmental issues related to computers, safe computing practices, emerging technologies, and postsecondary opportunities in computer-related fields.

## Computer Programming, Grade 12 College Preparation, ICS4C

This course further develops students' computer programming skills. Students will:

- learn object-oriented programming concepts
- create object-oriented software solutions
- design graphical user interfaces
- plan and carry out a software development project using industrystandard programming tools and proper project management techniques in teams
- investigate ethical issues in computing, and expand their understanding of environmental issues, emerging technologies, and computer-related careers.

Did you know?

#### Canadian Labour Market Information <u>http://</u>

www.labourmarketinformation.ca/ indicates that programming skills are necessary in Motion Pictures, Broadcasting, Industrial Engineering, and College Instructors.

## Computer Studies can you lead to an exciting future...

Animator Communications Manager—Military Computer Engineering Computer Forensics

Computer Graphic Specialist Computer Scientist Cryptanalyst Game Developer Internet Professional IT Security Medical Informatics Multimedia Careers Network Systems Analyst



Robotics Engineer Telecommunications Web Design

Visit this site for many more careers related to computer science http://www.khake.com/page2.html

Computing Degrees and Careers—Top 10 Reasons to Major in Computing

http://computingcareers.acm.org/

"Computing jobs are among the highest paid and have the highest job satisfaction. Computing and computer technology are part of just about everything that touches our lives from the cars we drive, to the movies we watch, to the ways businesses and governments deal with us."

## Business Department Head: Mr. J. Russell Computer Studies: Mrs. H. Dziewa



# **Ancaster High School**

# *COMPUTER STUDIES SCHOOL YEAR 2009/2010* COURSE SELECTIONS

## Why take Computer Studies courses?

Computer Studies prepares you for the future with transferable skills that include:

- problem-solving
- logical thinking
- creative design
- communications
- time management
- organization
- teamwork.



These are essential for employment in the 21st century. (Ministry of Education, <u>Computer Studies 2008</u>, <u>Ontario</u> Curriculum Grades 10 - 12)

Health Informatics is the study of health care, information technology, and management. <u>http://hi.conestogac.on.ca/</u> - RIM hired all grads from this program last school year.