

# Grimsby District Secondary School

## Computer Studies

### Introduction to Computer Studies

**ICS201**

This course introduces students to computer programming. Students will plan and write simple computer programs by applying fundamental programming concepts, and learn to create clear and maintainable internal documentation. They will also learn to manage a computer by studying hardware configurations, software selection, operating system functions, networking, and safe computing practices. Students will also investigate the social impact of computer technologies, and develop an understanding of environmental and ethical issues related to the use of computers.

**CREDIT:** 1

**TYPE:** Open

**GRADE:** 10

### Introduction to Computer Programming

**ICS3C1**

This course introduces students to computer programming concepts and practices. Students will write and test computer programs, using various problem-solving strategies. They will learn the fundamentals of program design and apply a software development life-cycle model to a software development project. Students will also learn about computer environments and systems, and explore environmental issues related to computers, safe computing practices, emerging technologies, and post-secondary opportunities in computer-related fields.

**CREDIT:** 1

**TYPE:** College

**GRADE:** 11

### Introduction to Computer Science

**ICS3U1**

This course introduces students to computer science. Students will design software independently and as part of a team, using industry-standard programming tools and applying the software development life-cycle model. They will also write and use subprograms within computer programs. Students will develop creative solutions for various types of problems as their understanding of the computing environment grows. They will also explore environmental and ergonomic issues, emerging research in computer science, and global career trends in computer-related fields.

**CREDIT:** 1

**TYPE:** University

**GRADE:** 11

### Computer Programming

**ICS4C1**

This course further develops students' computer programming skills. Students will learn object-oriented programming concepts, create object-oriented software solutions, and design graphical user interfaces. Student teams will plan and carry out a software development project using industry-standard programming tools and proper project management techniques. Students will also investigate ethical issues in computing and expand their understanding of environmental issues, emerging technologies, and computer-related careers.

**CREDIT:** 1

**TYPE:** College

**GRADE:** 12

**PREREQUISITE:** ICS3C1 - Introduction to Computer Programming

### Computer Science

**ICS4U1**

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. Student teams will manage a large software development project, from planning through to project review. Students will also analyse algorithms for effectiveness. They will investigate ethical issues in computing and further explore environmental issues, emerging technologies, areas of research in computer science, and careers in the field.

**CREDIT:** 1

**TYPE:** University

**GRADE:** 12

**PREREQUISITE:** ICS3U1 - Introduction to Computer Science