



## COURSE OUTLINE: Info Com Tech 11/12, Year 2018-2019

### **Instructor:**

Mr. Amory KC Wong

[amorywong@sd44.ca](mailto:amorywong@sd44.ca)

<http://amorykcwong.ca>

### **Course Description:**

Information and Communications Technology 11/12 develops practical computer skills and teaches software use while fostering inquiry skills. This process helps students become more knowledgeable and develop as thinkers. Students will also reflect upon their progress as learners. During the year, students focus on one or two communication options essential to our modern world. Students will work on producing professional quality results and maintain an electronic portfolio that can be submitted with their resume to employers or post-secondary institutes. Example projects: students can collaborate with students from the film and television program by providing CGI or computer animation to their projects; students can collaborate with engineering students on a robotics project (programming portion); students can create professional looking games for Java or iOS; students can create their own short computer animation; or students can work on their own audio production. Students completing an iOS project may submit it to iTunes for publishing. Students who demonstrate responsibility and hard work may go on a field trip to a high tech company such as Electronic Arts.

### **Big Ideas:**

- The design cycle is an ongoing reflective process.
- Personal design choices require self-exploration, collaboration, and evaluation and refinement of skills.
- Tools and technologies can be adapted for specific purposes.

### **Curricular Competencies:**

Understanding context

- Conduct user-centred research to understand design opportunities and barriers

Defining

- Establish a point of view for a chosen design opportunity
- Identify potential users, intended impact, and possible unintended negative consequences
- Make inferences about premises and constraints that define the design space

Ideating

- Identify gaps to explore a design space
- Generate ideas and add to others' ideas to create possibilities, and prioritize them for prototyping



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- Critically analyze how competing social, ethical, and sustainability considerations impact designed solutions to meet global needs for preferred futures
- Work with users throughout the design process

## Prototyping

- Identify and apply sources of inspiration and information
- Choose an appropriate form, scale, and level of detail for prototyping, and plan procedures for prototyping multiple ideas
- Analyze the design for the life cycle and evaluate its impacts
- Construct prototypes, making changes to tools, materials, and procedures as needed
- Record iterations of prototyping

## Testing

- Identify feedback most needed and possible sources of feedback
- Develop an appropriate test of the prototype
- Collect feedback to critically evaluate design and make changes to product design or processes
- Iterate the prototype or abandon the design idea

## Making

- Identify appropriate tools, technologies, materials, processes, and time needed for production
- Use project management processes when working individually or collaboratively to coordinate production

## Sharing

- Share progress while creating to increase opportunities for feedback
- Decide on how and with whom to share or promote their product, creativity, and, if applicable, intellectual property
- Consider how others might build upon the design concept
- Critically reflect on their design thinking and processes, and identify new design goals
- Assess ability to work effectively both as individuals and collaboratively while implementing project management processes

## **Course Content:**

Students will concentrate on one or two areas based on desire and availability of hardware/software. The three areas are: Digital Media Development, Computer Information Systems, and Computer Programming. Applied Digital Communications will not be an option for this course.

- Video production (DMD)
- Computer modeling/animation with Blender (DMD)
- Creating a secure network server (CIS)
- Creating a website on free hosting sites (CIS)
- Computer building, maintenance, diagnosis, and repair (CIS)
- Computer programming with Java and/or iOS (CP)
- Web programming with HTML and/or PHP/MySQL (CP)
- Some self-directed projects will be permitted



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## **General Assessment:**

- Assessment will be based on projects (80%), presentations (10%) and quizzes (10%).
- There will NOT be a final exam.
- Marks will be computed on a percentage basis.

## **Classroom resources:**

- Windows PC's
- iMac's
- We hope to use mostly free software so that student may install it at home such as Blender, Prezi, Eclipse, Java, XCode, Wix.com, iMovie, Garage Band, Audacity, and QuickTime

## **Resource Materials to be supplied by students:**

- It is helpful if a student has an available home computer to complete assignments
- Cost may be required depending on the curriculum options the student chooses.