UHS - Computer Department
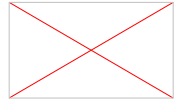
UHS has an excellent Computer Studies program

Teachers
Mr. J. Anandarajan – Subject Head Mr. J. Kotsopoulos Mr. A. Chan

UHS COMPUTER SCIENCE

TEAM 3652 UHS Robotics

Co-Curricular Activities: Clubs, Contests & Field Trips

COMPUTER DEPARTMENT

UHS has an excellent Computer Studies program that prepares students for post-secondary education & career paths in Computer Science, Engineering, IT, Business & STEM fields. The table below shows the courses that could be taken in each grade.

Grades	Computer Studies Course Offerings & Pathways		
9 or 10	**ICD2O** - **Digital Technology and Innovations in the Changing World** (No Prerequisites), 10 Open Programming in Python, Computational Thinking, Hardware, Software, and Innovations Final Project – **Game Design** Assignment		
10 or 11	**ICS3U Introduction to Computer Science,11U** Programming in Java	**ICS3C Introduction to Programming, 11 C** Programming & Applications	**IDC3O2 Game Design 11 Open** Game Design Process
11 or 12	**ICS4U Computer Science, 12 U** Advanced Programming in Java	**ICS4C Programming, 12 C** Programming in Java	**IDC4U3 3D Visualization 12U** 3D Animation

Course Offerings & Pathways

We prepare students for post-secondary education and career paths in:

Computer Science, Engineering, Information Technology, Business and **STEM fields.**

Grades	Course Options		
9 or 10	**ICD2O** – **Digital Technology and Innovations in the Changing World (No Prerequisites), Gr. 10 Open** Programming in Python, Computational Thinking, Hardware, Software, and Innovations **IDC2O - Digital Technology and Innovations** is an excellent course for **Gr. 9 students**.		
10 or 11	**ICS3U Introduction to Computer Science, Gr. 11 University** Programming in Java	**ICS3C Introduction to Programming, Gr. 11 College** Programming & Applications	**IDC3O2 Game Design Gr. 11 Open** Game Design Process
11 or 12	**ICS4U Computer Science, Gr. 12 University** Advanced Programming in Java	**ICS4C Programming, Gr. 12 College** Programming in Java	**IDC4U3**-**3D Visualization and VR, Gr. 12 University** Programming 3D and VR

Digital Technology and Innovations in the Changing World

Course Code - IDC2O (Gr. 10 Open)

A computer course that your child can take in Grade 9 or 10:

Units of Study for IDC2O

1. Understanding Computers

2. Introduction to Programming in Python

3. Emerging Technologies, Topics & Careers

4. Final Evaluations:
    Final Project – Software **Design** Assignment
    Exam

Introduction to Computer Science

Course Code – ICS3U (Gr. 11 University)

(No Prerequisites)

Units of Study for ICS3U

1. Programming Concepts & Skills utilizing Java
2. Software Development
3. Computer Environments & Systems
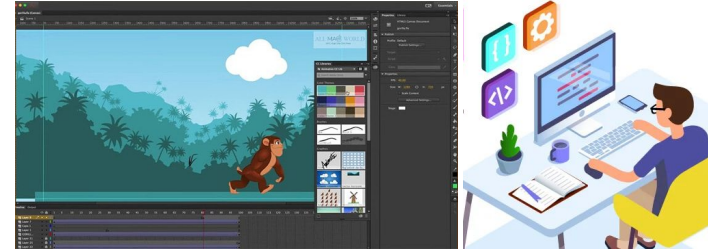4. Topics in Computer Science
5. Final Evaluations:
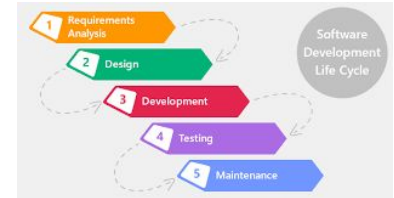
      Final Project – Software **Design** Assignment

      Exam

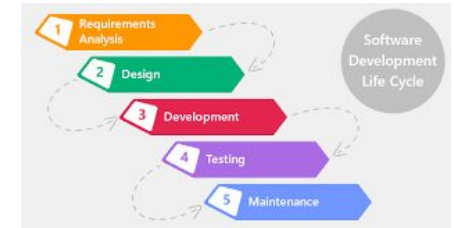# IDC3O2 - ProGamming

Introduction to Computer Game Design

- No prerequisite knowledge required
- This is an interdisciplinary course with content from Gr. 11 Media Art and Gr. 11 Computer Studies
- Problem solving necessary for the development and playing of games will be studied.
- Examples can include developing applications for Web, PC, or mobile applications (i.e., Android or Apple). Applications can include tools, calculators, simulations, and games.
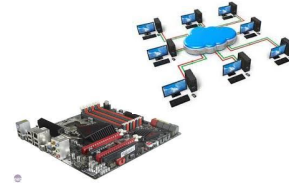
Introduction to Computer Programming

Course Code – ICS3C (Gr. 11 College)

(No Prerequisites)

Units of Study for ICS3C

1. Programming Concepts & Skills utilizing Java
2. Software Development
3. Computer Environments & Systems
4. Computers & Society
5. Final Evaluations:

    Final Project – Software **Design** Assignment
    Exam

Computer Science

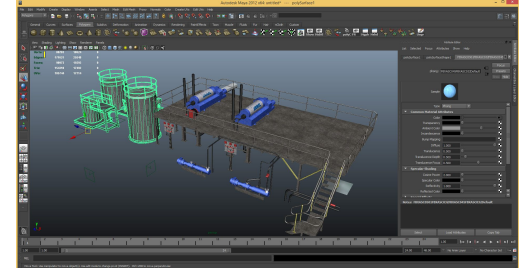## Course Code – ICS4U (Gr. 12 University)

(Prerequisite – ICS3U)

Units of Study for ICS4U

1. Programming Concepts & Skills utilizing Java
2. Software Development & Project Management
3. Object Oriented Programming
4. Advanced Algorithms
5. Final Evaluations:

      Final Project – Software **Design** Assignment

      Performance Tasks
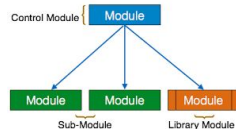
IDC4U3 - 3D Visualization and Virtualization (VR)

Introduction to Computer Game Design

- Prerequisite: Gr. 11 Media Arts or any Gr. 11 Computer Studies (TEJ3M is also accepted)
- This is an interdisciplinary course with content from Gr. 12 Media Art and Gr. 12 Computer Science
- Problem solving necessary for the development of real world applications in 3D environments and VR will be studied.
- Examples of development tools used can include Oculus, Maya, Unity, and C#.
- We welcome any student with Media Art and/or Computer Studies background and a passion for new technologies.

Computer Department Goals

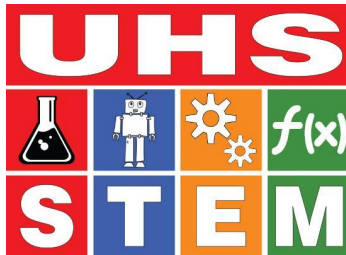Our goals for us teachers and students from the Modern Learning Framework:

Mind-Sets:	Growth Citizenship & Character Student Engagement
Deep Learning:	Assessment as learning Enhanced by technology Personalization
Skills:	Problem-solving Critical thinking

Extra-curricular Activities

UHS COMPUTER SCIENCE

TEAM 3652 UHS Robotics

STEM: Guest speakers & workshops

Computing Contests & Challenges

September 2024

June 16, 2022

UHS C{}MPUTER SCIENCE

Plans for 2024-2025

Computer Club meets: Fridays 3:10-4:25 pm (in-person)

- More than 100 students are meeting regularly
- Mentoring, teaching, coaching & community
- Fun activities, treats, …

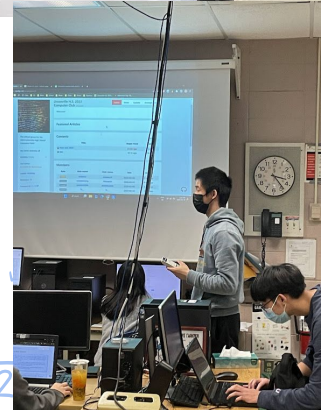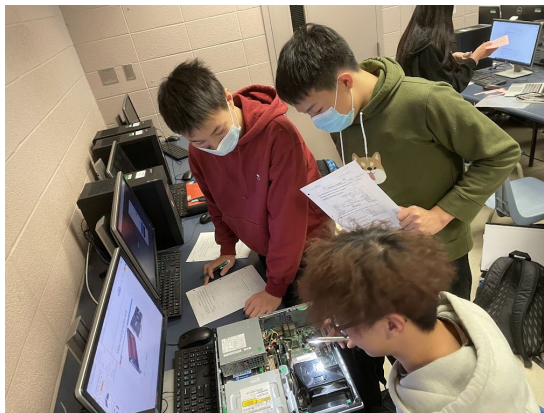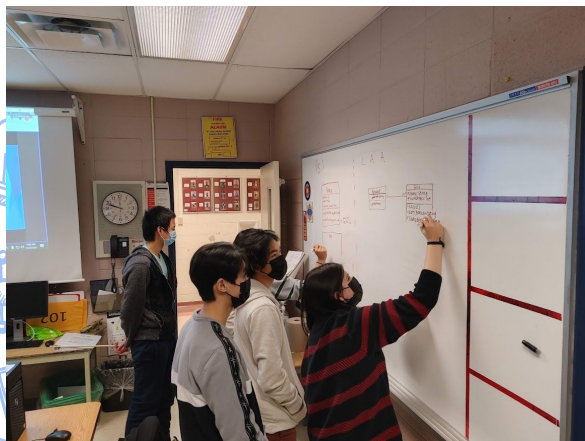| Break-out rooms - Learning Sessions |
| --- |
| • Learn about:
    ○ **Software Development: Java & C++**
    ○ **Competitive Programming:** Prepare for contests
    ○ **Web Development**
    ○ **Introduction to Java (beginner friendly sessions)**
Many student leaders are present to supporting learning & for leading discussions. |

Instruction & Enrichment Activities
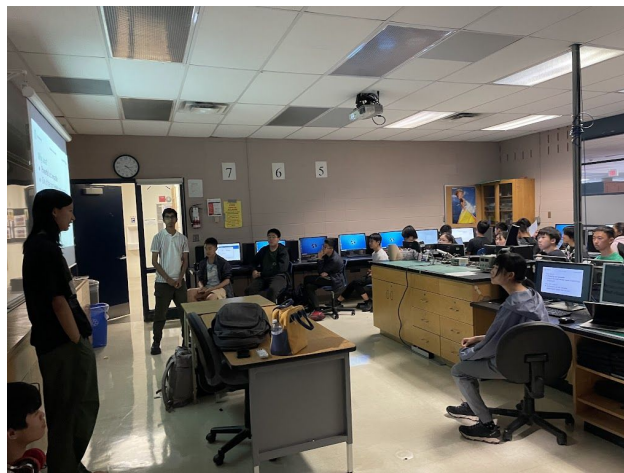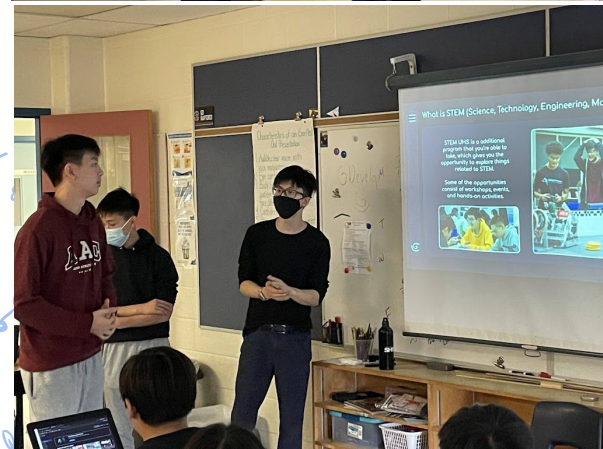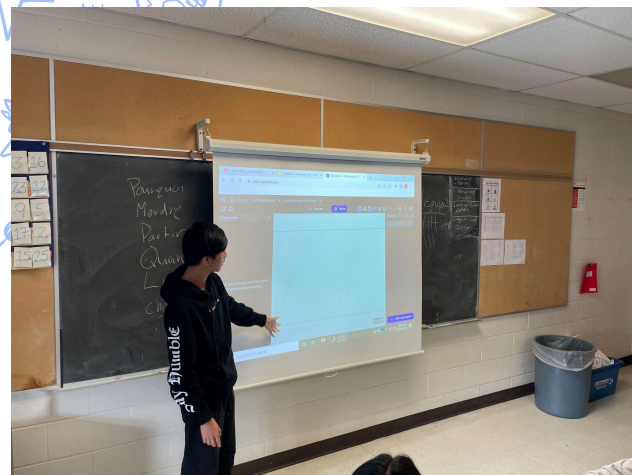
Instruction & Enrichment Activities

Q & A

Thank you!