

Computer Animation 10

District Number: 98

Developed by: FH Collins High School

Date Developed: January 2011

School Name: FH Collins High School

Course Code: YCCT 10A

Principals Name: Darren Hays

Board/Authority Approved Date:

Course Name: Computer Animation 10

Grade Level of Course: 10

Number of Course Credits: 4

Number of Hours of Instruction: 120 hours

Prerequisite(s): None

Special Training, Facilities or Equipment Required: Computer(s) with 2D and 3D computer animation software, a moving making software, a software program (as basic as Microsoft's Paint) that allows you to edit and create images, a scanner and a digital camera.

Course Synopsis:

This course will develop student's knowledge of and ability to generate various sketches, storyboards, tutorials, 2D graphic designs, 3D objects and computer animations and rendered outputs. Students will work both independently and in collaborative groups to analyze, plan and create 2D graphic publications and 2D/3D animations – learning to develop ideas through various production and presentation stages. In doing so, students will learn a variety of computer techniques specific to the various programs, image manipulation methods, and lighting, environment and camera effects. Students will develop employable working skills, project, management skills, communication techniques, time management and self-assessment skills. Students will explore career opportunities in graphic design and computer animation, and they will begin portfolio development. Students will present their sketches and 2D/3D work in a school based media art show. Students will also gain exposure to the Internet and basic Web Page Design.

Rationale:

This course has been developed to support and enhance students' analysis and knowledge of the vast growing computer animation and graphic design industry; and to encourage students' creativity and ability to generate 2D graphic designs

and 2D/3D animations. Students will focus on developing 2D graphics that capture graphic design principles. Students will develop and expand their creativity through the development of various 3D animations that capture movements and environments, replicate various items, develop original work, depict and present a story, and develop animations involving themes. Throughout they will develop an understanding of storyboards developments, the utilization of animation programs and the presentation of finished animations. Students will develop employable skills, portfolios for potential post secondary use, and tutorials that utilize terminology and techniques relevant to computer, animation software, and the animation industry.

Organizational Structure:

Computer Animation and Media Development 10

| Unit | Topic | Hours |
|------|---|----------------|
| 1 | Exploration and Development | 10 hrs |
| 2 | 2D Graphic Design and Publication | 20 hrs |
| 3 | 3D Animation Elements and Effects | 50 hrs |
| 4 | Final Animation Development, Production and Presentations | 40 hrs |
| | Total | 120 hrs |

Unit Descriptions:

Computer Animation 10

| Unit | Topic | Hours |
|------|---|---------|
| 1 | <p>Exploration and Development Prescribed Learning Outcomes <i>It is expected that students will . . .</i></p> <ul style="list-style-type: none"> - review course outline and timelines for projects and test. - understand and use the criteria assessment methods - review/learn the basics to utilizing the 2D/3D animation programs and generate simple objects.. - understand and use various methods when saving files. - explorer career opportunities in the graphic design and computer animation professions. - perform daily sketchbook requirements while expanding sketching ability. - learning the stages of animation production – pre-production, production and post-production. - learn and developing materials and textures. <ul style="list-style-type: none"> - use the digital camera, scanner, image software and images from the Web as material, textures and environments. | 10 hrs. |
| 2 | <p>Graphic Design and Tutorial development Prescribed Learning Outcomes <i>It is expected that students will . . .</i></p> <ul style="list-style-type: none"> - learn the key elements to Graphic Design and utilize the elements in simple projects. - understand the ethical issues relevant to misrepresenting work. | 20 hrs. |

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| | <ul style="list-style-type: none"> - analyse and critique graphic designs and animations. - development of specific terminology used with various programs and within the graphic design and animation industry. - create graphic designs for specific projects.. - utilize animation terminology and create well written and visual tutorials for simple 2D /3D objects. - share 2D/3D objects and test tutorials with peers and provide proactive, peer assessment. - present objects and tutorial. - critique and assess personal assignments. | |
|--|--|--|

| Unit | Topic | Hours |
|-------------|---|--------------|
| 3 | <p>3D Design and Animation Production Prescribed Learning Outcomes: <i>It is expected that students will . . .</i></p> <ul style="list-style-type: none"> - analyse the impact of digital animation on society. - acknowledgement of materials and ideas taken from other sources. - learn and use the principles of storyboard development and basic scriptwriting. - work independently and in collaborative teams to produce 2D/3D objects and animations. - develop complete 3D animations: the objects, the sequences and the environments. - develop various styles of animations: cartoon, realistic, thematic, etc. - develop effective scene development skills involving camera work, lighting, paths and simple special effects. - present animations to their peers. - critique their animations using provided criteria. - develop portfolios and submit finished work to their portfolios. | 50 hrs. |
| 4 | <p>Final Animation Production and Presentations Prescribed Learning Outcomes <i>It is expected that students will . . .</i></p> <ul style="list-style-type: none"> - produce an original, all-inclusive 3D Animation that includes: <ul style="list-style-type: none"> - a Storyboard and Script - a Graphic Design Component - a complete 3D animation - Self Assessment and Peer Assessment - present their final productions. - prepare work for a school event where the Media Arts will be showcased. - showcase aspects of their final animations on the school website and in their portfolios. | 40 |

Instructional Components:

The classroom teacher may use (but is not limited to):

- Direct instruction
- Indirect instruction
- Interactive Instruction
- Independent study
- Modelling
- Practical creativity
- Use of various examples
- Brainstorming
- Video Tape
- Group Work
- Analysis of commercial print, film and video works
- Analysis of own and classmates' video work

Assessment Components:

Forty percent (45%) of the grade will be based on short 2D graphic productions, short 3D animations, group work and various presentations.

- Projects will be evaluated using set criteria, specific to each project, that will be provided to students at the beginning of each assignment.
- Twenty five percent (25%) of the grade will be based on daily sketchbook assignments, portfolio work, and storyboard development.
- Ten percent (10%) of the grade will be based on students reflections and analyse of personal works and works found in print, video and on the web.
- Twenty percent (20%) of the grade will be based on knowledge of terminology, methods and techniques, time management, ability to produce and other evaluations suitable for the course content and administered at the end of each unit, midway through the course and at the end of the course.

Learning Resources:

This is the beginning list of learning resources that can be added to this curriculum.

1. Manuals and Tutorials for the various 2D and 3D programs being used.
2. Various Books, Magazines and Films that present 2D and 3D animations.
3. Documentaries on how various stories and their animations are created.
4. Guest speakers from the animation and graphic design profession.

Additional Course Information:

Schools will need adequate equipment and flexible access to computers to make the course run more smoothly.