BA Computer Animation 11

District Name: Kamloops/Thompson
District Number: SD #73
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Date Developed: March 2005
School Name: Westsyde Secondary School
Board/Authority Approved Date: 2005/05/30

Course Name: Computer Animation and Media Development 11

Grade Level of Course: 11
Number of Course Credits: 4
Number of Hours of Instruction: 100 hours
Prerequisite(s):

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 scanned images, .jpeg, .gif, .bmp files, a scanner and a digital camera.

Course Synopsis:
This course will develop and enhance student's knowledge of and ability to generate various sketches, storyboards, graphic designs and publications, 2D /3D computer animations and rendered outputs. Students will work both independently and in collaborative groups to analyze, plan and create complex 2D graphic publications and 2D/3D animations – taking them through the appropriate development, production and presentation stages. Students will learn and utilize a variety of advanced layering methods, image manipulation methods, and lighting, environment and camera special effects. As well, student will apply basic movie effects to their final rendered output. Students will develop employable working skills, project management skills, communication techniques, time management skills and self–assessment skills. Students will explore career opportunities in the animation field, and they will develop works for their post secondary portfolios, personal school based Web pages and a school based media arts show.

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 complex graphic designs and computer animations. Students will use graphic design principles to produce professional graphics works. In addition, students will focus on furthering their ability to develop quality 3D animations that capture natural movements, reflect moods, replicate and enhance existing objects, depict and present a story, and visually interpret sound and themes. Rendered outputs will be enhanced with sound and sequencing effects. Throughout, students will develop a keen understanding of the storyboard development, computer production and presentation stages involved in creating animations. Student will develop employable skills, artistic portfolios, and a strong knowledge of the computer and animation terminology and techniques. Students will plan and set-up an evening event where their works can be view by

their peers, parents and community members. Students will also gain exposure to the Internet and Web Page Design.

Organizational Structure:
Computer Animation and Media Development 11

Unit	Topic	Hours
1	Development	10 hrs
2	2D Graphic Design and Publication	15 hrs
3	Complex 3D Animation Elements and Effects and Movie Making Editing	35 hrs
4	Final Animation Development, Production, Movie Making Editing and Presentations	40 hrs
	Total	**100 hrs**

Unit Descriptions:

Unit 1: Development

Prescribed Learning Outcome:
It is expected that students will:

- develop sketching abilities through daily sketching assignments.
- establish portfolios and understand the impact of portfolios on career in the animation industry.
- learn and develop complex the 2D/3D computer techniques to generate complex computer animations.
- develop and use appropriate programming terminology.
- understand all terms and aspects of material and texture development.
- develop an extensive collection of materials and textures.
- use the scanner, digital camera and image editing software to further develop their collection of materials, textures and environment components to use in graphic designs and computer animations.
- will understand and utilize the concepts involved in planning a short animation. (Storyboards, scriptwriting and target audiences)
- learn and utilize a movie making program to add sound to and sequence animations.

Unit 2: 2D Graphic Design and Publication

Prescribed Learning Outcome:
It is expected that students will:

- analyse and discuss various styles and concepts used in 2D media designs used in print, video or the web.
- use software tools to optimize digital content for display size, file size, quality and ease of distribution.
- create 2D media using advanced techniques, special effects and software tools.
- construct graphic designs specific to projects using a variety of page layout and graphic design concepts and tools.

- construct materials, textures and images using a variety of methods of photo retouching and manipulation.
- consider the ethical issued involved in misrepresenting work of others in digital manipulation.

Unit 3: Complex 3D Animation Elements and Effects

Prescribed Learning Outcome:
It is expected that students will:

- integrate animation movement with sound and graphics.
- analyze and discuss natural movement of objects and figures, and sketch and animate natural movement.
- replicate and enhance existing 3D objects.
- develop and create animations that interpret moods, sound and music.
- develop and create short 3D animations through well structured planning, the use of various production tools and methods when creating the animation, and presenting their animations using a variety of graphic resources and rendering outputs.
- construct 3D environments using software processes and tools such as lighting, camera perspectives, environmental effects, shadow effects, paths and various special effects.
- apply sound and sequencing to completed animations to develop complete mini movies.
- work independently and in collaborative team efforts on various projects and stages of animation development.
- learn project management skills that involve team job responsibilities, the importance of communication and quality work and time management.
- use terms associated with digital animation in group work and oral presentation.
- acknowledge ideas and materials taken from other sources.

Unit 4: Final Animation Development, Production and Presentation

Prescribed Learning Outcome:
It is expected that students will:

- Utilize all methods, techniques, software programs, tools and devices taught over the last 3 Units to develop a completely original 3D animation.
- develop a complex and original 3D animation that involves all of the stages of development, production and presentation.
- critique and assess (with self and peers) final animation prior to presentation.
- add to and prepare their portfolios for post secondary applications.
- present portfolio work, 2D graphic work and 3D images on well designed web pages and in a school based media art show.
- collaboratively develop, organization and present a school based media art show.
- acknowledge ideas and material taken from other sources.
- plan, set-up and design 2D graphic signage for a school event that showcases their animation works.

- reflect on various works and peer assessment to edit and enhance a past animation.

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.