Grande Prairie Regional College
Fine Arts Department

Digital Design Studies

AR 1160 (1-0-2)
Digital Imagery - 3D part 1

1. Instructor: Lane Borstad
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2. Location Design Studios

3. Course Description
This course and its sequel AR 1170 are designed to give students an introduction to the theory and practice of three dimensional computer generated images (CGI). Students will model animate and render photorealistic images suitable for animation, game development, and/or video.

Note: AR 1160 and AR 1170 are not programming courses. They are designed for students interested in learning to use existing tools for creating 3 dimensional images, developing personal expertise with those tools, and understanding the resulting aesthetic.

4. Course Objectives
Students will:
a. Acquire a solid understanding of the concepts and principles of 3D object creation.
b. Develop skills in the use of specific computer tools applicable to 3D CGI.
c. Produce a portfolio of work which demonstrates their knowledge and expertise.

5. Topics (will include but are not limited to)

Major emphasis will be placed upon:

Modelling basics of point, line, and polygons
Organic shapes with spline curves, NURBS and Boolean operations.

Rendering of photorealistic images
Materials and surface treatments such as textures, reflection, refraction, transparency, specularity and bump mapping
Photographic and atmospheric effect such as motion blur, depth of field and fog.

6. Assignments
Assignments will be designed develop skills and expertise in the use of the appropriate tools for creating 3D CGIs.

7. Evaluation

Term assignments	40%
Final portfolio	50%
Participation	10%

Note: More than 10% absenteeism may constitute a failure, except for medical or extenuating circumstances, in which case a doctor's letter will be required.