3D Scanner and Rapid Prototyping Techniques EVDS 697.61 H(1.5-0)
Prof Denis Gadbois MW 9:00 TO 10:20
Starting on the second half of the semester on Wednesday Oct 24th
Fall 2012

Introduction

3D Scanner
Learn how to produce a detailed three-dimensional dataset presentation of products and facial features with detailed texture map using the Head & Face Color 3D Scanner and the Model Shop Color 3D Scanner of Cyberware. You will familiarize yourself with the software used to generate and present the scan.

3d Visualization:
Introduction to Cinema 4D

3D Printing

From the 3D scanning data learn the steps generating a 3D copy of your data (3d Routing and STL and etching using the laser cutter). The goal here will be to show how to navigate through software to perform the task without learning in depth the software such as Solidworks, Paraform etc. Therefore there is not prerequisite other that familiarity with Photoshop. Introduction to Mastercam.

Objectives

1. To acquire a basic knowledge of 3D scanning, 3D printing
2. To understand the various possible approach to present the data

Teaching Approach

This course favors hands on techniques. Following a demonstration, the student will learn to repeat the process immediately.

Content: Topic Areas

3D scanning using Cyberware Scanner and its related software
How to present 3D scanner data using Cinema 4D
From triangle to nurbs, understanding the sequence

Means of Evaluation

It is a University requirement to address the following aspects of course evaluation in a course outline: whether or not a passing grade on any particular component of a course is essential if the student is to pass the course as a whole; whether or not there will be a final examination and if an examination is held, whether the use of aids such as open book, etc. are permitted; the weights to be assigned to the various components which are to be considered in determining the final grade (term papers, laboratory work, class participation, tests, final examinations, etc.). This weighting may not be changed during the session or at the time of grade reporting; when writing and the grading thereof is a factor in the evaluation of the student's work. (Note: EVDS courses do not have "Registrar Scheduled" final exams.)

3D Scan Head	*25%*
3D Scan Product	*25%*
3D animation	25%
3d PRINTING	25%
Total	100%

Special Budgetary Requirements – please include these in the course outline.
Special budgetary requirements is the subscription on the video tutorial offered by Lynda.com for the maximum amount of $30.

Final grades will be reported as letter grades, with the final grade calculated according to the 4-point range

Grade	Grade Point Value	4-Point Range	Percent	Description
A+	4.00	4.00	92.5-100	Outstanding - evaluated by instructor
A	4.00	3.85-4.00	85-92.49	Excellent - superior performance showing comprehensive understanding of the subject matter
A-	3.70	3.50-3.84	80-84.99	Very good performance
B+	3.30	3.15-3.49	76-79.99	Good performance
B	3.00	2.85-3.14	73-75.99	Satisfactory performance
B-	2.70	2.50-2.84	70-72.99	Minimum pass for students in the Faculty of Graduate Studies
C+	2.30	2.15-2.49	66-69.99	All final grades below B- are indicative of failure atthe graduate level and cannot be counted toward Faculty of Graduate Studies course requirements.
C	2.00	1.85-2.14	63-65.99	
C-	1.70	1.50-1.84	60-62.99	
D+	1.30	1.15-1.49	56-59.99	
D	1.00	0.50-1.14	50-55.99	
F	0.00	0-0.49	0-49.99	

Notes:

- A student who receives a "C+" or lower in any one course will be required to withdraw regardless of their grade point average (GPA) unless the program recommends otherwise. If the program permits the student to retake a failed course, the second grade will replace the initial grade in the calculation of the GPA, and both grades will appear on the transcript.

Notes:
Written work, term assignments and other course related work may only be submitted by e-mail if prior permission to do so has been obtained from the course instructor.

It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. (http://www.ucalgary.ca/drc/node/46) Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.

Plagiarism - Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Most commonly plagiarism exists when:(a) the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test),(b) parts of the work are taken from another source without reference to the original author,(c) the whole work (e.g., an essay) is copied from another source, and/or,(d) a student submits or presents work in one course which has also been submitted in another course(although it may be completely original with that

student) without the knowledge of or prior agreement of the instructor involved. While it is recognized that scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious academic offence. It is recognized that clause (d) does not prevent a graduate student incorporating work previously done by him or her in a thesis. Any suspicion of plagiarism will be reported to the Dean, and dealt with as per the regulations in the University of Calgary Graduate Calendar.

Information regarding the Freedom of Information and Protection of Privacy Act (http://www.ucalgary.ca/secretariat/privacy) and how this impacts the receipt and delivery of course material

Emergency Evacuation/Assembly Points (http://www.ucalgary.ca/emergencyplan/assemblypoints)

Safewalk information (http://www.ucalgary.ca/security/safewalk)

Contact Info for: Student Union (http://www.su.ucalgary.ca/page/affordability-accessibility/su-structure/contact-info); Graduate Student representative(http://www.ucalgary.ca/gsa/) and Student Ombudsman's Office (http://www.su.ucalgary.ca/page/quality-education/academic-services/student-rights).

Note – please include one or both of the following:

Distribution of Grades
Grade Grade Point Value Graduate Description
A+ 4.0 Outstanding
A 4.0 Excellent – superior performance showing comprehensive understanding of the subject matter
A- 3.7 Very good performance
B+ 3.3 Good performance
B 3.0 Satisfactory performance
Note: The grade point value (3.0) associated with this grade is the minimum acceptable average that a graduate student must maintain throughout the program as computed at the end of each registration anniversary year of the program.