

# Visual Communication & Design

# 3D Design

## Recommended Reading



CINEMA 4D 11 Workshop  
by Arndt von Koeningsmarck

**VCIL  
1640**  
CRN: 15723

**Spring 2010 - 14 Week Session**  
Mondays, 5:30pm - 8:40pm  
Room ELA 132

### Course Description 3 Credit: 2 Lecture / 2 Lab

Technical and aesthetic fundamentals of 3D design. Use of industry standard software to develop 3D graphics for screen and print applications. Projects may include 3D design and visualization for information graphics, product visualization, prototyping, logo design and environmental visualization. Various design techniques including 3D parametric modeling, polygonal modeling and NURBS/HyperNURBS based modeling solutions. Introduces basic modeling, staging, lighting, texture and shader strategies to realize 3D concepts.

**Prerequisite(s):** VC&D-1010 Macintosh Basics or concurrent enrollment; or departmental approval.

### Course Objectives

Upon satisfactory completion of VCIL 1640 - 3D Design, the student should be able to perform the following outcomes and supporting objectives:

- A. Develop 3D graphics for screen & print applications using industry standard software.
  1. Describe various 3D modeling tools and systems used by 3D visualization industry.
  2. Identify primary 3D primitive, parametric and polygonal building blocks of 3D modeling.
  3. Modify primitive polygons into complex models by using move, scale, rotate and extrusion of fundamental polygon components.
  4. Experiment with different modeling strategies including primitive modeling, box modeling, patch modeling, NURBS modeling, subdivision modeling and other spline and polygon based modeling strategies.
  5. Explain benefits of low polygon and efficient geometry modeling vs. high polygon count modeling.
  6. Identify and implement basic light objects including spot, omni, point, area, infinite, sky, polygon, target lights along with other lighting systems and their differentiating factors.
  7. Demonstrate basic uses of materials, textures and shaders in a 3D environment.
- B. Produce a 2D rendering based on 3D design for information graphics, product visualization, prototyping, logo design, environmental visualization or related design/media project.
  1. Explore using reference images to build proportional and accurate representations in a 3D environment.
  2. Demonstrate effective use of multi-viewport modeling environment (front, left, top, perspective, camera, etc).

### Bill Whetsel

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### Office Hours

#### Monday

4:30 pm - 5:30 pm

#### Tuesday

8:30 am - 12:00 pm  
2:00 pm - 3:00 pm

#### Wednesday

8:30 am - 9:00 am  
10:50 - 12:00 pm  
3:10 pm - 5:30 pm

#### Thursday

8:30 am - 9:00 am

# 3D Design

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## Spring 2010

### Grading

#### Project Checklist

- (m) Snowman
- (m) Desk Scene
- (m) City
- Robot**
- (m) 1hr car project
- Transportation**
- Toy w/ Package & Label**

#### Projects & Grading

(m) = **Micro Projects** (30 points)

Various minor projects and exercises will be required throughout the course of the semester. See Project Checklist.

Project 1: **Robot** (40 points)

Students will design, model, texture and light a "Robot". The goal of this project is to explore basic modeling strategies from observation.

Project 2: **Transportation** (50 points)

Students will model, texture, light and composite a still from transportation design. The goal of this project is to model a vehicle from blueprints. The goal of this project is to model from technical reference (blueprints) and accurately represent the subject. The presentation will include the vehicle rendered and composited with an appropriate background.

Project 3: **Toy** (80 points)

*Students will build on the success of the Package Project and model a Toy. Students are required to model the toy as accurately as possible before providing a variation on the original design. The variations can be achieved through, texturing, modeling or a combination of the two. The final project will include the toy model and it's package.*

Extra Credit: **Cafe Challenge** (20 points)

*All students are welcome to earn extra credit by participating in any C4D Café Challenge. Challenge entries must conform to the rules established by the contest moderators and should be submitted prior to the final session of class. You can find the challenge entry at the following URL: <http://www.c4dcafe.com/ipb/index.php?showforum=148>*

*"The question of whether computers can think is just like the question of whether submarines can swim.."*

#### Grading Scale

A: 90+    B: 80+    C: 70+    D: 60+    F: 59-

# Course Schedule

Feb 1	Session 1	Intro to Cinema 4D Interface & Modeling
Feb 8	Session 2	Modeling, Texturing & Lighting Basics
Feb 15	Session 3	Materials, Rendering & Output
Feb 22	Session 4	<b>City Due</b>
March 1	Session 5	Modeling from Reference Images
<b>March 8</b>	<b>Session 6</b>	<b>Spring Break - No Class</b>
March 15	Session 7	Intro to Body Paint, Lighting & Staging
March 22	Session 8	Compositing, <i>Post Production &amp; Presentation</i>
March 29	Session 9	<b>Transportation Due</b>
<b>April 5</b>	Session 10	<b>Toy Package Draft Due</b>
April 12	Session 11	Final Project Kickoff
April 19	Session 12	Refined Preproduction & Proof of Concept
April 26	Session 13	Cinema 4D Tips & Tricks
<b>May 3</b>	Session 14	<b>Refine &amp; Render</b>
<b>May 10</b>	<b>Session 15</b>	<b>Final Presentation</b>

Final  
Presentation

# Course & Department Requirements

Visual  
Communication  
& Design

**Email Requirements:** All students are required to check Tri-C student email on a regular basis or forward the Tri-C email to a personal account. Email is my preferred method of contact.

## Attendance and Participation:

In this course, attendance and participation are not directly factored into the grading criteria, however, excessive absences or tardiness will inevitably undermine the success of your performance in class. All presentations, lectures, demonstrations and discussions are unique and can not be replicated. You are responsible for making up any missed content independently. Late projects will be reduced by 10%.

## Assignments & Projects:

Assignments are required to be completed both in and out of class and with the assistance of supplemental Web material. Students are required to use the Technology Learning Center located on the third floor of the ESS building as needed. Assignments are due on time as described by the course schedule. Late assignments will be reduced by 10%. Assignments are to be completed and prepared for presentation prior to the start of the class on the day they are due.

## Classroom & Course Policies

Student will refrain from any disruptive behavior in the class and VC&D department areas.

When attending class, students should be prepared to be productive and engaged in classroom activities.

Students should refer to the College Student Handbook for policies governing this class. <http://www.tri-c.edu/studenthandbook/default.htm>. Copies of the College Student are available and can be obtained from the Office of Admissions and Records.

Students who require adaptive or special needs because of disability or medical condition, please contact the instructor, counselor or Access representative as soon as possible, so that appropriate arrangements can be made.

No food or drink will be permitted in class at any time.

The lab is a public space. Keep it clean, safe and free of distraction.

Do not access or copy files and folders that do not belong to you.

Check the College Catalog for last day to withdraw from this course. Students who fail to withdraw themselves from class by this date will result in a failing grade for the course. Withdrawing from a class must comply with appropriate protocol and procedures set forth by the college. A student's failure to attend classes shall not constitute an official withdrawal.

If you have any questions or concerns about the information in this syllabus, please contact the instructor.



Cuyahoga Community College

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