Gallatin School of Individualized Study
SYLLABUS: ARTS-UG 1647 Making Virtual Sense
3D graphics studio for critically-driven creative applications

Gallatin School of Individualized Study, New York University
fall 2013, fridays 12:30 PM to 15:15 PM
35 West 4th Street, 2nd Floor Multimedia lab II

instructor

Carl Skelton carl@ultratopia.com
office hour: Fridays 11:00-12:00
room 431, 1 Washington Place

description

Until recently, the creation of interactive 3D graphics was only possible for large and capital-intensive uses: the armed forces, large-scale architectural/engineering work, mass entertainment. Now, open-source applications and powerful personal and portable computers are making it practical for individuals and small groups to independently build and share alternative visions. Whether you are interested in exploring new ways to construct complex networks of ideas in the present, or to imagine physical spaces to reflect and support new ways of life, this arts workshop provides a blend of critical orientation and hands-on experience.

In this open project studio, the majority of course time and work will be taken up with the development of student-built individual or small team concepts, to be developed as 3D graphic "fly-through" models. I will introduce each session with a brief presentation/discussion about a relevant example of visual/spatial concept design, from Classical Athens to Liberty City. Individual and group critiques of work in progress and one-on-one troubleshooting will be set up as necessary to support each artist and collaboration in the studio.

Theoretical discussions will be initiated with a mix of relevant writings and media. Here is a representative sampling of sources: Douglas Engelbart, Eric Raymond, William Gibson, Zaha Hadid, Judith Donath, the Athenian Acropolis, the Kalachakra Mandala, Salisbury Cathedral, the Schindler house, Artigas gardens, the 1958 World's fair Philips pavilion, the Seagram's building, Grant Theft Auto IV, the monastery of La Tourette, the Mangin plan, compendium.org, Betaville.

learning goals

Deeper understanding – through creative experiment and practice – of the ways in which every 3D design carries a rich set of sub-texts expressed by the relationships between its colors, compositional structures, and iconographic references.

For each student, an opportunity to develop their ability to make the most of every aspect of a model in the service of their particular creative interests and goals, whether for art, architecture, design, or visual communication in general.
course objectives

To provide an orientation to the rich history and underlying logic of 3D design;

To provide an opportunity for each participating student to produce a well-resolved project, through a process that will help both define and refine their personal creative agenda (and their portfolio).

requirements

1 regular attendance and participation (yes, I will be taking attendance)
2 midterm assignment: formal definition of the design to be undertaken- this can be presented in narrative (text) form, as a storyboard, or as a rough wireframe model in preparation for the final project.
3 final assignment: a fully detailed and complete model attendance & participation, 20%;
   midterm assignment 40%;
   final assignment 40%.

academic integrity

As a Gallatin student you belong to an interdisciplinary community of artists and scholars who value honest and open intellectual inquiry. This relationship depends on mutual respect, responsibility, and integrity. Failure to uphold these values will be subject to severe sanction, which may include dismissal from the University. Examples of behaviors that compromise the academic integrity of the Gallatin School include plagiarism, illicit collaboration, doubling or recycling coursework, and cheating. Please consult the Gallatin Bulletin or Gallatin website (http://gallatin.nyu.edu/academics/policies/integrity.html)

schedule

September  6
MIDTERM ASSIGNMENT SET; orientation to course goals and format
"Architecture": structuring relationships between elements; introduction to technology options, their underlying approach/philosophy/capabilities.

September  13
Betaville

September  20
Color: semantic, symbolic, iconography

September  27
The Kalachakra Mandala
Pecha Kucha- each student to give very short presentation about their project idea/strategy
October 4
Shape: vocabulary and grammar

October 11 (midterm assignment due)
Visual Rhetoric: Data Visualization and Mapping

October 18 (midterm grades submitted)
Memory Palace: Mnemonic Visualization
In-class review of one or two of the submitted projects

October 25
Flushing Meadows: short history of a future-scape

November 1
Production Values & Gestures

November 8
Detailing: Conceptual Organization With Color, Shape, & Texture

November 15
Layout- visual organization strategies
Pecha Kucha: very short presentations of work in progress

November 22 no class (thanksgiving recess)

November 29
Design Patterns: Alexander, Kay,

December 6
Collaboration and Workflows

December 13
Augmented Design Environments: the State of the Art

December 16 Final Project Due

Grades Submitted December 20th

reading list

http://www.rudi.net/books/200

Alexander, Christopher, Sara Ishikawa, Murray Silverstein (1977) *A Pattern Language /


Huizinga, Johan Homo Ludens/ a Study of the Play Element in Culture Boston: Beacon Press 1950 (original Dutch edition 1938)

Nieuwenhuys, Constant Une Autre Ville Pour Une Autre Vie Paris: Internationale Situationniste No. 3 1959


Tufte, Edward the Visual Display of Quantitative Information

Plato’s Republic / Book VII Allegory of the Cave http://www.gutenberg.org/ebooks/1497


More, Saint Sir Thomas Utopia/ Of Their Towns, Particularly of Amaurot http://4umi.com/more/utopia/3


Wigley, Mark (1999) *Constant's New Babylon / The Hyperarchitecture of Desire* Rotterdam 010 Uitgeverij


media

Mumford, Lewis (1939) *The City* http://archive.org/details/0545_City_The
*Open Street Map* http://www.openstreetmap.org/
*Google Earth* http://www.google.com/earth/index.html

Kalachakra Mandala:
http://vimeo.com/9160254
http://www.youtube.com/watch?v=rx4mdjMlqNo

Giant Steps Animation (double bootleg)
Martin Wattenberg, *Newsmap* http://newsmap.jp/
Zhang Yimou (2002) *Hero* PRC
Teshigahara, Hiroshi (1964) *Woman In The Dunes* Japan
PBS *The World of Tomorrow*
Ric Burns (1999) *New York* (you can find it in 8 segments on Youtube)

software

Concept mapping/org and flow charts/project management

http://compendium.open.ac.uk/institute/download/download.htm
http://www.mindmapping.com/
http://www.omnigroup.com/products/omnigraffle/
http://www.gteam.com/
http://argouml.tigris.org/
http://processing.org/

3D modeling

Blender
http://www.blender.org/ (open source)
Sketchup
Maya & 3DS Max (free student licenses)
http://usa.autodesk.com/adsk/servlet/pc/index?siteID=123112&id=17355061
Rhino
http://www.rhino3d.com
(note: the Beta releases for Rhino 5 are free - Windows AND Mac OS - and they work pretty well)

Collaborative Design

betaville.net
Revit
GTeam http://www.gteam.com/