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.

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,
arquitecture, 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](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


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

Raymond, Eric (1999) *The Cathedral and the Bazaar*  
http://www.catb.org/esr/writings/homesteading/cathedral-bazaar/


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.gtteam.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/