

Computational Design Solutions I

using
Rhino Visual Basics
IAP Workshop
Jan 17 – 23

Tentative Schedule:

Jan 17: Introduction to basic programming concepts

(TUES) *Language Structure:*

Variables

Types (int, double, string.....)

Conditionals

Looping

Methods and functions

COMMENTING CODE[↓]

Rhinoceros[®] Scripting using above concepts

Workshop exercise based on programming concepts above

Homework: first design problem (this will be initially attacked in class)

- Students will substitute functions and function calls to get code working

Jan 18: Discuss homework and solution steps

(WED) Data Structures (lists, tables, arrays, etc.)

Dim vs. ReDim (memory handling and allocation)

Scoping (global, local)

COMMENTING CODE[↓]

Debugging procedures

Discuss pseudo code methods for achieving design and to ease coding

Announce groups for final projects based on submitted bios

Homework: second design problem (this will be initially attacked in class)

Finish unfinished portion for homework and or develop new design variations

Jan 19: Present design problems from homework

(TH) Decide on a project within group or design a new related project

Homework: Write a half page *detailed* outline of project

Draw a rough representation of project using Rhinoceros[®]

Design functional specs (pseudo code)

Jan 20: Present group design projects

(FRI) Discuss design projects

Offer commentary, criticism, and possible approaches to solution

Homework: Start group projects

Jan 21 – Jan 22: Work on and fabricate final projects

Jan 23: Final presentations of solutions to design projects shall include:

- *Design concept specifications*
- *Physical model using fabrication methods (ZPrinter, lasercutter, etc.)*
- *Animation of script (using screen capture software similar to HyperCam or HyperSnap: <http://www.hyperionics.com/>)*

[↓] This is a mandatory process for debugging code. Instructor or TA will NOT debug uncommented code