2022 Design Skills Workshop (DSW)

INTRODUCTION
DSW is a 3-unit mini summer course (#48-689) for incoming SoA Masters students to establish a baseline of digital design skills appropriate to the expectations of the design culture at SoA. The full extent of the course must be completed in order to receive a passing grade for the course that will appear on the fall semester transcript and is included in the cost of your full-time fall tuition. DSW is an online-only series of micro workshops, assignments, and tutorials on digital design skills. Organized around short design exercises, students will demonstrate the fundamentals of 2D graphics (Photoshop, Illustrator, InDesign), architectural drafting (Rhino), 3D modeling (Rhino), and parametric modeling (Grasshopper).

DSW will cover specific tools and workflows to equip students with the foundational skills for solving design problems through the use of computational tools. All SoA students are expected to be familiar with the protocols and workflows covered in DSW.

REGISTRATION
All incoming graduate students must complete the following survey. AMP students should contact the instructors to opt out of the course. Students must first have an active Andrew ID to use the form: https://forms.gle/1bQ7PA2haR76DhWX9

Students are not allowed to register for this course on their own (i.e. via SIO). Students who are required to take the course will be automatically registered. Students for whom the course is optional should notify the instructors before the second week of the course of their intentions to register, audit, or not participate in the course.

CANVAS SITE
After registration, all information regarding the DSW course will be available via the course Canvas site: https://canvas.cmu.edu/courses/29575

DSW STAFF
Course Instructors
- Matthew Huber — mzh@andrew.cmu.edu
- Eddy Man Kim — mankim@andrew.cmu.edu

Teaching Assistants
- TBA
COURSE STRUCTURE
● Duration: Jun 27 – Aug 5 (6 weeks)
● Location: online (Web-based via Zoom)
● Format:
  ○ Lecture/Workshop (2hrs) — Mondays 10:00 am (EST)
    ■ Live (virtual) attendance is highly recommended. If live attendance is not possible, students are expected to view recorded versions of the sessions in a timely manner.
  ○ Online Submissions (via Miro) — by Sundays 10:00 pm (EST)
    ■ Students are required to post assignment progress on a weekly basis.
    ■ Students are encouraged to post questions regarding the assignment materials and techniques. Questions and responses will be aggregated as a shared FAQ resource.
  ○ Office Hours — TBD
● Content:
  ○ Design studio culture, best practices, and work rigor
  ○ Fundamental skills in communicating design intent and narrative through the use of drafting, modeling, and rendering workflows
  ○ Generative workflows using Rhino and the Grasshopper scripting platform

SOFTWARE REQUIREMENTS
At a minimum, students must have the following software installed and ready to use on your own computer before coming to class.

● Rhino 6 or higher
● Photoshop
● Illustrator
● InDesign

ONLINE TUTORIALS
CMU students are given full access to all LinkedIn Learning tutorials for free by logging in with their Andrew IDs via this link: https://www.cmu.edu/web/training/linkedin-learning.html. It is strongly recommended that students complete as many tutorials on their own, prior to attending DSW.

Essential
● Photoshop CC 2021 Essential Training: The Basics
  https://www.linkedin.com/learning/photoshop-2021-essential-training-the-basics/ (6h 29m)
● InDesign CC 2021 Essential Training
  https://www.linkedin.com/learning/indesign-2021-essential-training/ (5h 11m)
● Rhino 6 Essential Training
  https://www.linkedin.com/learning/rhino-6-essential-training-2/ (2h 8m)
● Grasshopper Essential Training
  https://www.linkedin.com/learning/grasshopper-essential-training/ (6h 24m)

Optional
● Illustrator CC 2021 Essential Training
  https://www.linkedin.com/learning/illustrator-2021-essential-training/ (5h 27m)
● AutoCAD: Construction Drawings
  https://www.linkedin.com/learning/autocad-construction-drawings/ (3h 18m)
● Architectural Site & Envelope in Rhino
  https://www.linkedin.com/learning/architectural-site-envelope-in-rhino/ (1h 12m)
● Rhino: Architectural Interior & Detail
  https://www.linkedin.com/learning/rhino-architectural-interior-detail/ (1h 45m)
● Vray for Rhino Tutorial Videos
  https://www.chaos.com/vray/rhino/tutorial-videos
● Vray for Rhino Official Documentation
  https://docs.chaos.com/display/VRHINO/V-Ray+5+for+Rhino+Help

Other Resources

● http://www.grasshopper3d.com/page/tutorials-1 (Get started here with access to tutorials, videos, and other resources)
● https://discourse.mcneel.com/c/grasshopper-developer (Go here to find answers to specific GH questions from the GH community)
● https://grasshopperdocs.com/ (a list of all GH components with minimal description)
● http://www.food4rhino.com/grasshopper-addons (Extensions for the Grasshopper environment)

GENERAL TEXTS

Textbook / Resources

● Arturo Tedeschi. AAD – Algorithms-Aided Design. (Len Penseur Publisher, 2014) – Full text available — Full text available online
● Helmut Pottmann, Andreas Asperl, Michael Hofer, and Axel Kilian. Architectural Geometry. (Bentley Institute Press, 2007) – Full text available online

Essays

● Evans, Robin. “Translations from Drawing to Building,” in Translations from Drawing to Building and Other Essays. (The MIT Press, 1997) - Full text available online
● Lynn, Greg. “Animate Form,” in Animate Form. (The Princeton Architectural Press, 1999) - Full text available online

QUESTIONS or CONCERNS

For general questions, contact the instructor at the email address above. For computer and networking questions, contact the SoA computing services at soa-ithelp@andrew.cmu.edu.