workshop on grasshopper
PARAMETRIC DESIGN
inspired by natural forms, processes and systems

Parametric thinking empowers a universe of design opportunities. Articulating an idea in geometric or mathematical relationships pushes a designer to understand its core essence and reveals a spectrum of related forms. A robust family of possibilities is especially crucial for addressing dynamic conditions caused by factors such as climate change: it is the core of resilient design.

McNeel’s Rhino Grasshopper software is a popular visual programming language for parametric design. It has spawned hundreds of free and low-cost parametric apps that span from jewelry design, architecture, landscape design up to the scale of aerospace. Grasshopper analysis plug-ins empower designers to see how adjusting a form affects performance in realms including lighting, structure, water run-off, energy, acoustics, etc.

This fundamental class will coach students on using Grasshopper to explore design alternatives using NATURE’s forms and processes as inspiration. The 2-credit course will meet twice a week for 12 sessions that include presentations, hands-on practice, discussions and reviews of student work. After 6 weeks, students will apply Grasshopper skills to a concurrent design studio project or a digital fabrication project for a final review in week 11. Grad students will present about an inspiring design process.

Students must have a computer with Rhinoceros running on Windows. No previous experience is required. Successful completion of this course provides a strong foundation for learning other design and analysis applications.

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