

DIGITAL DESIGN AND FABRICATION (DDF)

DDF205. Computer Aided Design I. 3 Credits.

Introduces 3D computer aided design and drawing, rapid manufacturing. Students become acquainted with the virtual spaces of CAD software and NURBS geometry with the intent to output tangible objects through 3D printing. COURSE FEE.

DDF210. Computer Aided Design II. 3 Credits.

This course furthers knowledge learned from DDF205, developing an advanced understanding of NURBS surfacing along with introducing organic modeling and mesh sculpting. Further application of 3D visualization technologies and advanced manufacturing will be emphasized. COURSE FEE.

DDF220. Introduction to Computational Media. 3 Credits.

This course serves as an introduction for programming for the digital arts in a visual context. Students will be guided through an introduction to the fundamentals of programming (variables, conditionals, loops and iteration). Further exploration will build on these fundamentals of programming to explore software-based 3D modeling. COURSE FEE.

DDF293. Dgtl Dsgn & Fab Selected Topic. 0 Credits.**DDF305. Material Studies. 3 Credits.**

Inherent in the build world are materials and systems designed to aid the human condition. When designing for rapid manufacture and function the products that we use every day depend on material choices when considering mechanical properties and physical advantages. Through making and theory-based lectures this course will explore materials situated within the advanced manufacturing and 3D printing domains. COURSE FEE.

DDF310. Making Things Move. 3 Credits.

Making Things Move is the integration of Science, Technology, Engineering, Art, and Math (STEAM) and computer technologies into the synergic design of computer controlled electro-mechanical systems. The instructors approach to this course will be project-based. COURSE FEE.

DDF320. Design Intents. 3 Credits.

This course introduces collaborative team research and interdisciplinary practices that approach real world challenges. Tenets of design practices include being human-centeredness, prototype-driven, and mindful of process. Topics include design processes/innovation methodologies, need finding, human factors, visualization, rapid prototyping, team dynamics, storytelling, and project leadership. COURSE FEE.

DDF393. Dgtl Dsgn & Fab Selected Topic. 0 Credits.**DDF495. Indep Study Digital Design Fab. 1-12 Credits.**