

Three-Dimensional Design Courses (Art and Art History) (TDSN)

TDSN Courses

This is a list of courses with the subject code TDSN. For more information, see Art and Art History (College of Liberal Arts and Sciences) in the Catalog.

TDSN:2210 Introduction to 3D Design 3 s.h.
Materials, their formal and structural possibilities. Prerequisites: ARTS:1510 and ARTS:1520. GE: Engineering Be Creative.

TDSN:2240 Digital Drafting with AutoCAD 3 s.h.
Basic principles of 2D and 3D computer-aided drafting; use of AutoCAD software to draw plans, elevations, and sections for objects and interior spaces. Prerequisites: CERM:2010 or SCLP:2810 or TDSN:2210 or MTLs:2910. Same as CEE:2240.

TDSN:2250 Digital Prototyping 3 s.h.
Basic knowledge and practical technical skills using 3ds Max studio software; experience creating and manipulating basic forms and working with texture, background, light, and camera viewpoints; basic animation. Corequisites: ANIM:2125 or CERM:2010 or DSGN:2500 or DRAW:2310 or INTM:2710 or MTLs:2910 or PHTO:2600 or PNTG:2410 or PRNT:2610 or SCLP:2810 or TDSN:2240.

TDSN:3200 Product Design 4 s.h.
How objects are designed and structured; modeling, graphic skills necessary for basic project development. Corequisites: TDSN:2250.

TDSN:3205 Advanced Robotics 3 s.h.
Advanced peripheral integration and control, including stepper motors, solar power, audio playback, and live data manipulation through physical sensors; advanced fabrication (e.g., printed circuit boards and wiring harness design); for students with previous experience in robotics and electronics. Prerequisites: SCLP:3840.

TDSN:3220 Interior Design 4 s.h.
Relationship of interior space to its architecture, environment, human element; color, materials, furnishings, lighting; projects. Prerequisites: TDSN:2250.

TDSN:3230 Color for Interior Design 4 s.h.
Use of color for interior spaces; principles of color theory reviewed and applied to 3D environments; color as a compositional element and psychological tool. Prerequisites: TDSN:2250.

TDSN:3240 3D Computer-Aided Design arr.
Three-dimensional computer-aided drafting; use of AutoCAD software. Prerequisites: MTLs:2910 or SCLP:2810 or CERM:2010 or TDSN:2210.

TDSN:3260 Design for Production 4 s.h.
Special issues and topics in design. Prerequisites: TDSN:2240. Corequisites: TDSN:2250.

TDSN:3280 Forms and Textiles 4 s.h.
Products and seating design with soft materials; students experiment with diverse soft materials and textile construction techniques to design and make unique functional forms. Prerequisites: TDSN:2210. Corequisites: TDSN:2240 and TDSN:2250.

TDSN:3285 Fabrication and Design: Hand-Built Bicycle 4 s.h.
Building a bicycle frame by hand; use of CAD modeling and development of fabrication skills to create a modern-day work of art. Prerequisites: TDSN:2240.

TDSN:4010 Furniture Design I 4 s.h.
Introduction to advanced problems of furniture design and manufacturing; students design and fabricate a chair with sustainable methods using computer numerical control (CNC) technologies. Corequisites: TDSN:3200.

TDSN:4020 Furniture Design II 4 s.h.
Continuation of TDSN:4010; design of virtual environments. Prerequisites: TDSN:4010.

TDSN:4050 Site Specific Design 1 s.h.
Art of planning, building, and presenting at real professional design venues; students plan, design, and build an environment to display selected 3D design work at one or two professional design venues. Prerequisites: TDSN:2250. Corequisites: TDSN:3200 or TDSN:3220 or TDSN:3230 or TDSN:3260 or TDSN:3280.

TDSN:4210 Digital Animation and Visual Art 3 s.h.
Assimilation of digital animation into realm of traditional fine art mediums; exploration of fundamental skills (storyboarding, rotoscoping, stop motion, motion graphics, 3D animation); Adobe Photoshop, After Effects, and 3ds Max techniques and software that are industry standards in the careers of animators, storyboard artists, roto artists, digital compositors, and motion graphic artists; production of a show reel of student work for group showing and final critique. Prerequisites: ARTS:1510 and ARTS:1520.

TDSN:4255 Hand-Built Bicycles in the Rockies 1 s.h.
Building a titanium hand-built bike; use of hand-built fabrication techniques and tools; translation of CAD design into first full-suspension titanium fat bike; aspects of metal technology, concept development, fabrication geometry and design, metal properties and selection, tool selection, brazing and TIG welding, jig setup and use, and mitering; travel to Fort Collins, Colorado to work for one week at Black Sheep Bikes (two-time winner of the North American Hand Built Bike Show). Prerequisites: ARTS:1510 and ARTS:1520.

TDSN:4260 3D Computer Graphic Art 3 s.h.
Three-dimensional modeling; emphasis on movement in form and function; advanced modeling techniques in polygonal and NURBS modeling to generate fundamentally sound models used for rapid prototyping, visualization, and animation; Box modeling, NURBS modeling, rigging, materials, bump maps, normal maps, and rendering; fundamental skills of computer graphic artists working in the fields of animation, architectural visualization, video game modeling, industrial design, and engineering design. Prerequisites: TDSN:2250.

TDSN:4270 Problems in 3D Design: Locative Art Practice **4 s.h.**

How our relationship to Earth has changed with new forms of locating place in it; new forms of representation used to express exploration of that relationship; designing a locative research project; exploration of four major course concepts (geo-annotation, locative inscription, GPS drawing, alternative cartography) using portable, networked, and location-aware computing for mapping relationships. Prerequisites: ARTS:1520 and ARTS:1510.

TDSN:4299 Undergraduate Individual Instruction **arr.**
Individual instruction in 3D design for advanced students.

TDSN:6299 Individual Instruction in 3D Design **arr.**
Individual instruction in 3D design for advanced students.