The Design School
Fall 2017 Electives for Graduate Students

All courses are 3 credit hours and are open to other disciplines within The Design School unless noted otherwise. Day and time are subject to change.

**ANP 494**
Connections & Assemblies

Instructor: Thomas Hartman  
*Day and time: TBD*  
*3 credit hours*

This seminar will provide an opportunity for students to explore strategies of connection and assembly of materials. The course will explore both the *pragmatic/*technical aspects of assembly and the *aesthetic/*poetic potential afforded by the joining of materials. In this seminar, the technical implications of aesthetic decisions will be considered along with the aesthetic implications of technical decisions. While there are usually multiple solutions to assembly as merely a “technical problem”, it is important to understand that the method of assembly greatly affects the texture, legibility, constructability, complexity/simplicity of the finished building/object and should be embraced as an integral part of what we consider the “design process”.

This course is open to students in the following programs: master of urban design, undergraduate interior design, undergraduate architecture, master of interior architecture and master of architecture.

**ATE 521**
Building Environmental Science

Instructor: TBA  
*Tu & Th, 3:00p.m. - 4:15p.m.*  
*3 credit hours*

The purpose of this class is to teach scientific and engineering principles of various mechanisms affecting heat loads in buildings. This involves methods of calculating building peak heating and peak cooling loads, annual energy estimation methods, human comfort and indoor air quality, ventilation and air infiltration into buildings, solar loads on buildings, and windows and fenestration systems. State-of-the art design methods used by the professional community as well as pertinent standards will be covered. Team work will be emphasized by means of a design project.

**ATE 550**
Passive Heating & Cooling

Instructor: Harvey Bryan  
*Tu & Th, 1:30p.m. - 2:45p.m.*
3 credit hours

This course will undertake a detailed study of passive and low-energy heating and cooling strategies for use in buildings. The main focus of the course will be on methods of analysis, planning and design to estimate and control heat loss and gain in order to maximize comfort and minimize energy consumption. Passive and low-energy strategies will include: for heating -- thermal mass, direct gain, sunspace and trombe wall systems; for cooling -- thermal mass, shading, daylighting, ventilation, radiation, evaporation, and earth contact will be discussed. Emphasis is on architectural solutions and the natural, renewable energies available in the local climate and at the site.

ATE 553
Architectural Technology IV

Instructor: Harvey Bryan
Tu & Th, 6:00p.m. - 7:15p.m.
3 credit hours

The primary objective of this course is to provide architectural students with the essential skills to develop structural systems, perform basic structural analysis of buildings and appreciate the integration of structure and architecture. The primary structural material for this course will be steel; however other materials will be used for example.

ATE 560
Building Energy Analysis I

Instructor: Marlin Addison
M, 6:00p.m. - 8:45p.m.
3 credit hours

Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects.

ATE 562
Experimental Evaluation

Instructor: Muthukumar Ramalingam
M, 7:30a.m. - 10:15a.m.
3 credit hours

Introduction and hands-on familiarity with various types of sensors and measuring equipment used in solar energy applications and in building energy use and conservation, experiments involve active and passive solar concepts and systems, and analysis of energy/day lighting components and systems in buildings.

ATE 563
Architectural Technology VI

Instructor: TBA
Tu & Th, 4:30 p.m. - 5:45 p.m.
3 credit hours

Analysis, design, and detailing of steel buildings and frames. Lateral analysis of small rigid and braced frame systems.

**DSC 558**
**Daylighting**

Instructor: TBA
Th, 4:50 p.m. - 7:35 p.m.
3 credit hours

Daylighting as a design determinant; concepts, techniques, methodology, experiments, and case studies.

**DSC 598**
**Basic Model Making Techniques**

Instructor: Mark Fromeyer
Tu, 9:40 a.m. - 11:30 a.m. – Session A
1 credit hour

Basic setup and modeling techniques to show students how to create repeatable, safe operations. Instruction on basic principles of woodworking, material selection, re-saw, dimensioning, tool selection. Emphasis on cut lists, planning parts, basic tool knowledge, measuring and marking and joinery. Contact instructor at (patrick.plehn@asu.edu) for permission to register for the class along with your ASU Affiliate ID, program and year within the program.

**DSC 598**
**Fundamentals of CNC in Modeling**

Instructor: Jesus Orozco
W, 9:40 a.m. - 11:30 a.m. – Session A
1 credit hour

All things CNC. Emphasis will be on how to assemble different file types for best practice on CNC equipment. DXF/DWG (2-D files), STL, SLDprt, IGES, STEP 93-D files. How CNC works, basic knowledge on code creation, tooling, different types of machines, fixtures, materials, part setup, and planning, joinery techniques, and topography. Contact instructor at (patrick.plehn@asu.edu) for permission to register for the class along with your ASU Affiliate ID, program and year within the program.

**DSC 598**
**Cold Casting and Mold Making for Modeling**

Instructor: Mark Fromeyer
Th, 9:40 a.m. - 11:30 a.m. – Session A
1 credit hour
Basic knowledge on mold making and cold casting. Emphasis on material selection, planning, form-making, and project planning. Students will be required to execute one part from techniques and methods discussed. Contact instructor at (patrick.plehn@asu.edu) for permission to register for the class along with your ASU Affiliate ID, program and year within the program.

**GRA 440**  
**Finding Purpose**

Instructor: Will Heywood  
Tu, 6:00p.m. - 8:45p.m.  
3 credit hours

Career orientation in the creative professions, including value clarification, decision making, lifestyle planning, goal setting, and expression of individual talents.

*Open to 3rd and 4th year undergraduate students.*

**GRA 526**  
**Visiting Designers**

Instructor: Rengifo  
Th, 4:50p.m. - 7:35p.m.  
3 credit hours

Students learn about the "business" of creativity. This course familiarizes students with processes of being a creative as a business through discussions with successful valley creatives - graphic designers, architects, artists, related professional (photographers, writers, and production artists), web and interactive developers and the like.

**GRA 598**  
**Advanced Exhibit Design**

Instructor: Eric Montgomery  
Tu & Th, 10:30a.m. - 1:15p.m.  
3 credit hours

In their senior year students continue with series of “core” course requirements. This course familiarizes students with processes of designing exhibits that bring together a vast amount of information into a coherent space which is intellectually and visually stimulating. It addresses issues of visual communication in three dimensions as well as storytellling through design. It fosters the process of conceptual and visual discovery. It offers an opportunity to develop teamwork since an exhibit design is a collaborative rather than an individual activity.

*Contact Associate Professor Dosun Shin (dosun.shin@asu.edu) for permission to register for the class.*
**IND 598**  
**Sculpted CAD modeling for Product Design – Lecture + Lab**

Instructor: Reid Jonson  
M, 11a.m. - 12:30p.m. + online  
3 credit hours

This course teaches the latest cloud-based CAD/CAM tools that combine organic shapes modelling, industrial design, mechanical design, and manufacturing in one comprehensive collaborative platform. In this course students will learn how to sculpt their ideas, then move to parts and assembly modelling, motion, strength testing, and, as a final step, create drawings, photo-realistic renderings and prepare for manufacturing on a CNC machine or 3D printers.

Contact Associate Professor Dosun Shin (dosun.shin@asu.edu) for permission to register for the class.

**IND 598**  
**Visual Storytelling for Design**

Instructor: Scott Reeves  
Tu & Th, 6:00p.m. - 7:15p.m.  
3 credit hours

Visual storytelling with an emphasis on products, design portfolios and personal branding.

Contact Associate Professor Dosun Shin (dosun.shin@asu.edu) for permission to register for the class.

**INT 415**  
**Latin American Design**

Instructor: Jose Bernardi  
Tu & Th, 12:00p.m. - 1:15p.m.  
3 credit hours

The impact of Latin American culture and civilization on design throughout the Americas.

**INT 471**  
**Facilities Management**

Instructor: Brie Smith  
Tu & Th, 6:00p.m. - 7:15p.m.  
3 credit hours

Facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs.
INT 527
Contemporary Design Theory

Instructor: Jose Bernardi
Tu, 4:30-7:15p.m.
3 credit hours

Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies.

INT 598
Contemporary Issues in Interior Architecture

Instructor: Santiago
Tu & Th, 1:30p.m. - 2:45p.m.
3 credit hours

The modern practice of interior architecture has its foundation in both interior design and architectural practice and has evolved over the past 50 years to the robust and mature discipline of interior architecture that is evident in today's design practice. This class will explore the issues associated with the contemporary practice of commercial interior architecture. Research and discussion will focus on issues that are driving change in the practice of interior architecture and the design of commercial interior spaces.

INT 598
Portfolio Design

Instructor: Diane Bender
Tu & Th, 4:30p.m. - 5:45p.m.
3 credit hours

This course is an introduction to the process of creating a traditional printed portfolio and a digital portfolio for application to graduate school or for use in employment interviews. Emphasis is placed on the smooth transition of taking design work from print to digital media, while maintaining a consistent style between the two versions. Career development materials and personal branding are also discussed.

LPH 598
Hand Drawing & Illustration

Instructor: Duane Blossom
M, 8:35a.m. - 11:20a.m.
3 credit hours

This course introduces rapid visualization of hand drawing as tools for visually seeing, understanding and capturing existing scenarios; and as the foundation to imagining the future and the development of alternative design ideas.
LPH 598
Current Issues & Topics in Landscape Architecture

Instructor: Cheng
Tu & Th, 12:00p.m. - 1:15p.m.
3 credit hours

This seminar explores current trends and projects within the discipline of landscape architecture. Through examination of built work, we will examine issues and topics that may originate or extend beyond the scope of landscape architecture practice. In this way, we will consider not so much what is being built, but why.

Topics may include, but are not limited to: walkable landscapes, landscape narrative, social factors, ecological design and planning, new materials and technology, environmental psychology, healing environments, regenerative practices, environmental perception, carbon sequestration, global climate change, and design for special needs.

MUD 598
Great Cities

Instructor: TBA
Tu & Th, 10:30a.m. - 11:45a.m.
3 credit hours

A historical introduction to the major urban design elements and the anatomy of cities, including public space, urban form, infrastructure and landscape. Prerequisites: admission to Master of Urban Design program, or instructor approval. Co-requisites: MUD 521 Advanced Urban Design Studio I.

MUD 598
Biomimetic Design and the Sonoran Desert

Instructor: Darren Petrucci
W, 9:00a.m. - 11:45am
3 credit hours

Students will gain awareness and understanding of biomimicry theory through firsthand field observations of the plants, animals, and ecosystems of the Sonoran Desert. The course will operate as a laboratory for challenging conventional design practice as a response to nature’s principles. Students will engage in: field visits, readings, case studies, and applied projects.

This seminar is open to all 4th year, 5th year and 6th year students in Architecture, Industrial Design, Interior Design, Landscape Architecture, Urban Design and Visual Communication Design.