

# Urban Design (UDES)

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## COURSES

### **UDES 1301. INTRODUCTION TO PRINCIPLES OF SUSTAINABLE URBAN DESIGN. 3 Hours.**

This course is an introduction to sustainable urban design and its principles through the lenses of the college's four disciplines: landscape architecture, architecture, planning and public affairs. How these disciplines interface with environmental, economic, socio-cultural and design sustainability is the focus of the course, culminating with an exploration of urban ecology.

### **UDES 2303. HISTORY OF URBAN DESIGN, FORM, AND INFRASTRUCTURE. 3 Hours.**

This course examines the history of urban design, form and infrastructure in a variety of cities, providing students with an understanding of how decisions about design, form and infrastructure impact the lives of inhabitants. Prerequisite: Restricted to Sustainable Urban Design-intended students.

### **UDES 2441. URBAN DIAGRAMMING AND COMMUNICATION I. 4 Hours.**

This course establishes a framework for understanding how design is used to create sustainable urban communities. An interdisciplinary course, its focus is upon heightening student awareness of the built environment by investigative sketching and measuring, as well as by digital means. This process of documenting encompasses the human uses of objects and systems that comprise an urban community: buildings, public spaces, landscape, transportation systems, waterways, and other infrastructure. Issues of social and economic equity are introduced, as well as the roles that human interaction and participation play in successful design strategies. Prerequisite: Restricted to Sustainable Urban Design-intended students.

### **UDES 2442. URBAN DIAGRAMMING AND COMMUNICATION II. 4 Hours.**

This course continues developing students' abilities to visually document urban environments in relation to urban ecologies, while beginning to investigate how designs are created to address the range of scales and ecological impact in a city, from the individual site to a neighborhood. This course focuses upon the impact of infrastructure upon a city's human and ecological systems, encompassing the plant and animal species that are part of urban environments. Prerequisite: C or better in UDES 2441. Restricted to Sustainable Urban Design-intended students.

### **UDES 3304. DIGITAL METHODS IN SUSTAINABLE URBAN DESIGN. 3 Hours.**

This course introduces students to the use of digital tools with a focus on their applications in sustainable urban design. The course will cover a wide spectrum of digital art methodologies: image creation and manipulation; simple animation and sound design; static and moving images; digital fabrication outputs; utilizing both pixel and vector-based applications. Prerequisite: C or better in UDES 3552 and LARC 4324. Restricted to Sustainable Urban Design majors. Students must have a minimum cumulative GPA of 2.8 and a minimum major course GPA of 2.8.

### **UDES 3551. URBAN DESIGN STUDIO I: URBAN RESILIENCY. 5 Hours.**

This studio focuses upon the planning and design for disaster recovery and the impact upon infrastructure caused by natural events such as earthquakes, flooding and tornadoes. The studio explores the latest and most reliable recovery strategies for rebuilding and repairing a city's human and ecological systems. Students document streets, waterways, transportation and landscape, examining issues of congestion, pollution, storm water management, and transportation access. Group design projects are based on both the scale of neighborhoods and regions. Prerequisite: C or better in UDES 2442. Restricted to Sustainable Urban Design majors. Students must have a minimum cumulative GPA of 2.8 and a minimum major course GPA of 2.8.

### **UDES 3552. URBAN DESIGN STUDIO II: MOBILITY. 5 Hours.**

This studio examines the major shifts in the organization and spatial allocation of cities that are transforming urban mobility infrastructures, from light rail to pedestrian zones to cyclist lanes. The interface of transportation, public open spaces, buildings and landscape architecture is explored as well as issues of diversity, equity, and inclusion. A series of group design projects at the neighborhood scale continues the refinement of students' graphic and written skills. Prerequisite: C or better in UDES 1301, UDES 3551. Restricted to Sustainable Urban Design majors. Students must have a minimum cumulative GPA of 2.8 and a minimum major course GPA of 2.8.

### **UDES 4391. CONFERENCE COURSE. 3 Hours.**

Independent study guided by an instructor on a regular basis. May be repeated for credit. Prerequisite: Permission of the department.

### **UDES 4395. TOPICS IN SUSTAINABLE URBAN DESIGN. 3 Hours.**

Studio and lecture courses to explore and present selected topics in architecture and design. May be repeated for credit as topics change. Prerequisite: Permission of the department.

### **UDES 4404. URBAN SUSTAINABILITY PROJECT CAPSTONE. 4 Hours.**

In the Capstone Course, students will culminate their learning by completing a sustainability project at the Institute for Sustainability and Global Impact (ISGI) at UT Arlington under the supervision of the Chief Sustainability Officer. Student capstone projects will address pressing issues concerning sustainable urban communities. Students may collaborate and work on a project for an external organization, or work on sustainability programs and projects at UT Arlington. Potential capstone sites will range from local non-profits and government agencies to faculty research projects and private sector initiatives. The Capstone Course is a one-semester project. Prerequisite: C or better in UDES 3552. Restricted to Sustainable Urban Design majors. Students must have a minimum cumulative GPA of 2.8 and a minimum major course GPA of 2.8.

**UDES 4551. URBAN DESIGN STUDIO III: CLIMATE CHANGE. 5 Hours.**

This studio examines specific climate change issues as selected by the instructor. The studio is a recognition of an evolving set of data with shifting timelines and levels of impact for evaluating the ecological impact of climate change, upon the built environment. One of the areas of study will include sea-level rising and its global impact upon coastal cities. The students will engage in problem solving, using contemporary design and planning strategies on a regional scale. Prerequisite: C or better in UDES 3552. Restricted to Sustainable Urban Design majors. Students must have a minimum cumulative GPA of 2.8 and a minimum major course GPA of 2.8.

**UDES 4552. URBAN DESIGN STUDIO IV: ADVANCED SUSTAINABLE URBAN DESIGN. 5 Hours.**

This studio examines the roles that smart city technologies play in sustainable urban design. The group design projects in the Urban Resiliency and Urban Mobility studios are reassessed, and the course culminates with individual design projects based upon new locations. Prerequisite: C or better in UDES 4551. Restricted to Sustainable Urban Design majors. Students must have a minimum cumulative GPA of 2.8 and a minimum major course GPA of 2.8.