**ENDS - ENVIRONMENTAL DESIGN (ENDS)**

**ENDS 101 Design Process**  
Credits 3. 3 Lecture Hours.  
(Arch 1311) Design Process. Fundamental design processes, issues and theories relevant to design resolution and the creation of new ideas; creative thought processes from the formation of ideas through incubation to final product and future impact on the physical environment and society.

**ENDS 105 Design Foundations I**  
Credits 4. 1 Lecture Hour. 8 Lab Hours.  
Visual and functional design principles; development of skills in perception, thought and craft as they apply to the formation of two- and three-dimensional relationships; design attitudes and environmental awareness.  
**Prerequisite:** Major in environmental design.

**ENDS 106 Design Foundations II**  
Credits 4. 1 Lecture Hour. 6 Lab Hours.  
Approaches to problem identification and problem solving emphasizing an awareness of human, physical and cultural factors influencing design; reinforcement of visual and verbal communication as applied to the design process.  
**Prerequisite:** ENDS 105.

**ENDS 108 Design and Visual Communication Foundations II**  
Credits 5. 1 Lecture Hour. 12 Lab Hours.  
Approaches to problem identification and problem solving emphasizing human, physical and cultural factors influencing architectural design; understanding of space, materiality and tectonics in a human body scale; development of drawing methods with emphasis on analytical drawing; reinforcement of visual and verbal communication as applied to design processes.  
**Prerequisite:** ENDS 105 and ENDS 115.

**ENDS 114 Introduction to Design Communication**  
Credits 3. 1 Lecture Hour. 4 Lab Hours.  
Introduction to drawing methods for non-majors; free hand drawing as a creative and communicative tool to express design thinking, architectural form and space.

**ENDS 115 Design Communication Foundations**  
Credits 3. 1 Lecture Hour. 4 Lab Hours.  
(Arch 1307) Design Communication Foundations. Introduction to and practice of tools, methods, techniques available for graphic communication; graphic communication and the design process; observation and other forms of free-hand drawing and drawing systems that develop representational and descriptive capabilities.  
**Prerequisite:** Major in environmental design.

**ENDS 116 Design Communication Foundations II**  
Credits 3. 1 Lecture Hour. 4 Lab Hours.  
(Arch 1308) Design Communication Foundations II. Introduction to design drawing using a wide variety of tools ranging from conventional drafting and drawing equipment to the latest digital graphic applications; a focused investigation of analytical drawing as it contributes to the design process; experience of a wide variety of drawing conventions intended to equip students to navigate a design process.  
**Prerequisites:** ENDS 115 and concurrent enrollment in ENDS 106.

**ENDS 485 Directed Studies**  
Credits 1 to 6. 1 to 6 Other Hours.  
Special problems in environmental design. May be repeated for up to 12 credit hours.  
**Prerequisite:** Approval of instructor and degree coordinator.

**ENDS 489 Special Topics in...**  
Credits 1 to 4. 1 to 4 Lecture Hours.  
Selected topics in an identified field of environmental design. May be repeated for up to 9 credit hours.  
**Prerequisite:** Approval of instructor or department head.

**ENDS 491 Research**  
Credits 1 to 4. 1 to 4 Other Hours.  
Research conducted under the direction of faculty member in environmental design. May be repeated 2 times for credit.  
**Prerequisites:** Admission to upper level in environmental design; approval of instructor and department head.