

Drawing on Nature

Arch. 4411, Arch. 8833

T-Th, 9:30-11:00. Additional flexible time to be arranged with instructor.

The Georgia Tech Design Collaborative: Multidisciplinary Design Research Center

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A painter told me that nobody could draw a tree without in some sort becoming a tree; or draw a child by studying the outlines of its form merely; but, by watching for a time his motions and plays, the painter enters into his nature and can then draw him at will in every attitude. - Ralph Waldo Emerson

This excerpt from Emerson's essay, *History*, is a timeless reminder that the ability to visually represent conceptual thought is fundamental to any field of endeavor, whether from the point of external observation or internal diagrams and projections. It is the intention of this course to creatively explore the design principles inherent in the makeup of the natural world through the art of drawing. Since the beginning of recorded history, the theories and the techniques of drawing have been of primary importance to our understanding of that world. The ancient concept of linear circumscription or outline, tone, value and color has been the basis upon which we visually describe our perceptions and define our intentions.

Our research will begin with a series of direct observation exercises focusing on gesture, proportion, line weight, scale, perspective and composition followed by studies of master draftsmen such as Raphael, Michelangelo, Da Vinci. Their great skill as artists was a direct manifestation of their profound understanding of plants, animals, scientific principles, the human figure, and nature at large. As we begin to direct our attention more closely on the natural world, Professor Yen / Weissburg will critique the ongoing investigations in regards to primary biological principles and discuss research on theories of Biologically Inspired Design. Site visits to the Blue Heron Nature Preserve and other locations as well as life figure drawing sessions will be part of the study. Each student will then be asked to investigate a relevant topic of their choosing and present their findings by means of drawings, group discussions, and a brief written reflection.

The objective of this investigation is to inspire a deeper and more rich understanding of the natural state and to speculate on contemporary applications of those discoveries to each chosen field of study.



Leonardo da Vinci

Botanical Studies, ca 1480-85



Melissa Bergin, Student, Aerospace Engineering

Aerodynamics of the Goldfinch, Spring 2014