



ECOSA Institute 201B North Alarcon Street, Prescott, Arizona 86303

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www.ecosainstitute.org

ECOSA Institute Semester Course Descriptions

Summer 2010

May 17 – August 20, 2010

The summer semester program is built in an integrative approach and embodies several themes that would be defined as “courses” in traditional education programs. The summary information provided below is an attempt to articulate in a linear format a diverse, complex, and holistic learning experience. Students who participate in the entire semester program may choose to receive up to 16 semester credits from the following list.

*** Exploration of Regenerative Ecological Design (Upper Division)**

This course covers a wide spectrum of design disciplines and explores ways in which the designer can effect change by applying ecological design principles to products, places and architecture. Through a series of field trips, research projects and design exercises, students will learn basic skills in a variety of design areas from graphic design to architecture and from landscape design to city planning. At the conclusion of this course, students will have a sound understanding of the many potential paths to a design career and an understanding of the critical role the designer plays in ensuring a future for humankind.

*** The urban dilemma (Upper Division)**

One of the semester projects will be a redevelopment of a 150-acre area in the heart of Prescott. This “course” examines the development of the modern city and proposals for transforming it into an ecologically sound habitat. The dilemma of our current cities is their inadequate fit within the resources of the earth. The world’s population, now at six billion, is estimated to grow another six to twelve billion by 2050. With the environment already stressed and a number of pathologies, both human and ecological, appearing, the criticality of the city to housing populations is self-evident. The student will acquire a basic understanding of the complications inherent in transforming the current system and potential ways for such transformation to regenerate the health of both human and natural ecosystems.

*** Materials and methods of ecological design (Upper Division)**

This course examines the traditional use of materials and systems by indigenous people and how they may relate to modern design methods. Through research projects and presentations, we review high technological solutions as well as issues in the appropriateness of technology and the application of traditional systems to modern problems. Through the use of the ecological foot printing methodology, we examine the true environmental impact of solutions proposed by students. Finally, through hands-on construction practicums, students examine a variety of building materials and systems and how to integrate them into a holistic design methodology.

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ALEXIS KAROLIDES Rocky Mountain Institute Dr. DAVID ORR Oberlin College ANTOINE PREDOCK Architect
Dr. JOHN TODD Ocean Arks International SIM VAN DER RYN Architect JAMES WINES Architect



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*** Design Practicum (Upper Division)**

Throughout the semester the student will learn design by completing projects for clients interested in exploring ecological design. Students work both individually and in team situations as a means of integrating and exploring a systems approach to the design brief. In addition to completing drawings, the student is expected to learn how to interact with clients, develop budgets and life cycle cost assessments, and create outline specifications. This course will give a basic understanding of the principles of passive and active solar design and methodologies for creating more sustainable products, habitats and cities. Students will explore aesthetics and the ability to coherently discuss what constitutes the aesthetic experience and the ethical implications of design. The intent is to induce a new awareness of aesthetics as a branch of philosophy and suggest an ethical framework on which to base an ecological design theory. The student is expected to incorporate all the techniques and technologies of regenerative design into his or her projects to demonstrate an understanding of methods for lowering the impact of human artifacts. These designs are also intended to bring ecological design into a “real world” context and vary from small buildings to larger planning projects. Students will also have the opportunity to develop a portfolio of design work that may be useful in pursuing a career or further education in sustainable design.

*** This course is only offered as part of the Ecosa Institute's Summer of Sustainable Design Program.**

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