

CURRICULUM GUIDE

Setting a path for your future education

// MASTER OF SCIENCE IN ARCHITECTURE

ECOLOGICAL AND SUSTAINABLE DESIGN

Ecological and Sustainable Design (ESD) focuses on the theory and practice of architectural and environmental design that makes maximum use of the same renewable energy flows and material cycling processes by which all other living systems on earth are sustained. It is an approach to design that is holistic in nature, encompassing a concern for ecological systems, building technological systems, and socio-cultural/existential systems. Ecological systems are studied not only as the context for architecture, but also as models for design, providing the fundamental principles by which sustainable buildings are designed and operated. Energy and resource conserving building technologies as well as healthy and ecologically benign building materials are studied so that ecological design principles can be implemented in environmentally appropriate architecture. The emphasis also stresses the socio-economic, political and cultural/existential context of design as a complexly structured framework within which questions of sustainability must be considered and building designs implemented. The ESD option necessarily involves the development of a broad understanding of architectural and environmental design that is as much philosophical as it is practical.

REQUIRED CURRICULUM CREDITS

NON-THESIS OPTION

ARCH 716	Topics in Environmental Systems in Arch.	3
ARCH 725	Architectural Research Methods	3
ARCH 830	Advanced Architectural Studies	5-8
	Electives	16-19
	Total Credits	30

THESIS OPTION

ARCH 716	Topics in Environmental Systems in Arch.	3
ARCH 725	Architectural Research Methods	3
ARCH 899	Thesis	8
	Electives	16
	Total Credits	30

RECOMMENDED ELECTIVE CREDITS

In addition to completing the required courses, students are encouraged to select an area of focus. The Ecological and Sustainable Design emphasis recognizes the interdisciplinary and collaborative nature of the sustainable approach to design. As such, at least six elective credits should be taken outside the Department of Architecture. Students consult with their faculty advisors to develop a program of study that meets their individual needs and interests.

AGEC 525	Natural Resource Economics	3	GEOG 760	Human Impact on the Environment	3
ARCH 715	Topics in Architecture Seminar	3	IAPD 625	Lighting in IAPD	3
ARCH 716	Topics in Environmental Systems in Arch.	3	IAPD 760	Interior Architecture Seminar	Var.
ARE 740	Environmental Control Sys. for Buildings	3	LAR 704	ENV Landscapes Planning & Design	5
BIOL 529	Fundamentals of Ecology	3	LAR 720	Public Lands & Natural Resources Law	3
CE 563	Environmental Engineering Fundamentals	3	PHILO 595	Environmental Ethics	3
ECON 527	Environmental Economics	3	SOCIO 536	Environmental Sociology	3
GEOG 605	Remote Sensing of the Environment	3			

NOTES

ARCH

30

TOTAL HOURS REQUIRED
FOR GRADUATION