Master of Science in
ARCHITECTURE

Graduate Special Study Areas:

Design and Decision Systems • Computer-Aided Design • Building Science • Sustainable Architecture • Facilities Management
1 The Architecture Department at Cal Poly

Individuals selecting Cal Poly for graduate studies enroll in one of the most active centers of architectural education in the country. Since 1968, Cal Poly has awarded several thousand Bachelor of Architecture and Master degrees. This is a noteworthy accomplishment in professional education. Cal Poly graduates practice throughout the country and around the world. The Cal Poly architect is noted for design abilities and engineering and technical expertise.

2 The Master of Science in Architecture Program

At every educational level the department is dedicated to the professional practice of architecture. Within this graduate program, the particular challenge is to provide for enhanced professional competency through specialization and research achievement.

The Master of Science in Architecture (M.S.Arch.) degree is a research program that provides an opportunity for specialization, as opposed to a Master of Architecture (M.Arch.) degree that would lead to licensing in architecture for persons with a first degree in a field other than architecture. The M.S.Arch. program, therefore, prepares graduates who do not hold a Bachelor of Architecture degree for specialist and consultation positions in the broad field of Environmental Design within the Architecture, Engineering and Construction (AEC) industry. (Please note: The M.S.Arch. degree is not a first professional degree in architecture for licensing purposes.)

The M.S.Arch graduate program specializes in five broad areas that are significant to the design and sustainment of the built environment: Design and Decision Systems; Computer-Aided Design; Building Science; Sustainable Architecture; and, Facilities Management. Each of these areas encompasses a wide range of potential study topics that may be selected for in-depth research subject to the interests and desires of the individual graduate student. However, regardless of the selected research topic students are expected to be knowledgeable of fundamental building science principles, and advanced information technology concepts.

3 Graduate Study Areas

Graduate students are encouraged to build on the knowledge that they have gained from their previous academic studies and/or professional experience, as they acquire and contribute new knowledge in their chosen research specialization within one of the following broadly defined research areas.

Design and Decision Systems: Exploration of human cognitive and problem solving capabilities in the context of recent advances in intelligent information systems, including: information representation in computers; collaborative software agents with automated reasoning capabilities; semantic Web services; knowledge management systems; natural language interpretation; and, case-based reasoning.

Computer-Aided Design: Research into the development and utilization of computer systems in the architectural process, with particular emphasis on design information representation and management, the development and utilization of knowledge bases, and expert design assistants. Students are encouraged to participate in the research projects undertaken by the CAD Research Center of the College of Architecture and Environmental Design.

Building Science: Focusing on the increasingly complex performance and technical building aspects of architectural design and the knowledge and skills needed when designers deal with the challenges associated with such topics as energy responsive architecture, acoustics, lighting, and wind-effects phenomena.

Sustainable Architecture: Study of the built environment as a low impact necessary enhancement of the natural environment in the service of man, including: renewable energy systems; waste recycling; energy conservation concepts and practices; self-contained biospheres; materials of construction and embodied energy considerations; green buildings; and, unhealthy building environment.
Facilities Management: Examination of the practice of coordinating the physical workplace with the people and work of an organization. It integrates the principles of business administration, architecture, and behavioral and engineering sciences. Facility management is concerned with the design, construction, maintenance, and management of physical environments. Facility managers usually work as generalists managing teams of specialists such as architects, interior architects, interior designers, engineers, construction personnel, communication technicians, and so on.

4 Qualifications and Prerequisites
Applicants to the M.S. Arch. program are expected to have earned an undergraduate degree from an accredited tertiary educational institution. A degree in architecture or related environmental design discipline is desirable but not required. Applicants whose first degree is from a non-English speaking university will be required to have taken the Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE) at the time their application is being considered.

5 Entry into the Master of Science in Architecture Degree Program
For more detailed information and application forms prospective applicants may wish to access the following Web site: www.ess.calpoly.edu/_admiss/interest/; or contact:

Graduate Program Coordinator
Architecture Department
Cal Poly, San Luis Obispo, CA 93407
Telephone: 805-756-1316
FAX: 805-756-7568
Email: jpohl@calpoly.edu

6 After Acceptance
The faculty works with the newly admitted graduate student to refine his or her course of study. Within each graduate study area, there exists a spectrum of study and research possibilities. What is finally agreed upon as the specific course of study is the result of collaboration between student and advisor.

CAL POLY AND SAN LUIS OBISPO
The California Polytechnic State University in San Luis Obispo, more commonly referred to as Cal Poly, is one of twenty-two campuses of the California State University System. With an enrollment of approximately 17,000 students, Cal Poly is well known for its "hands-on" educational approach in science, agriculture, engineering, and architecture.

The college of Architecture and Environmental Design is one of the foremost educational programs in the United States offering degrees in Architecture, Landscape Architecture, Architectural Engineering, Construction Management, and City and Regional Planning. The total enrollment of the College is almost 2,000. By virtue of its size, the faculty of the Architecture Department includes specialists in a variety of technical and scientific fields, such as: design methods; computer-aided design; thermal environment; acoustics; lighting; structural systems; and, sustainable architecture. In addition, the polytechnic orientation of the University enables the Architecture Department to draw upon an impressive array of instructional and research facilities beyond the reach of most architecture programs.

Cal Poly is located in San Luis Obispo, a city with a population close to 43,000, on the California Central Coast approximately halfway between Los Angeles (200 miles south) and San Francisco (230 miles north). The picturesque 400 acre central campus is surrounded by approximately 5,600 acres of campus land devoted mostly to student oriented agriculture, outdoor laboratories, and similar field study projects. Mild climatic conditions allow year round enjoyment of outdoor activities and sports. The campus is co-educational with a strong program of student activities and emphasis on student participation in academic governance.
Resources in support of the graduate study areas in the Master of Science in Architecture Program are drawn from both inside and outside the College of the Architecture and Environmental Design on an inter-disciplinary basis.

**College Facilities**

**Architectural Science** - a wide range of acoustic, lighting, heat transfer, and air movement testing and measurement equipment.

**Collaborative Agent Design (CAD) Research Center** - conducts funded applied research into the application of artificial intelligence to collaborative human-computer decision-making in complex and time-critical problem solving environments.

**Multi-Media Facilities** - comprising an extensive photographic workshop facility.

**Fabrication Workshops** - fully-equipped wood and metal workshops for the construction of architectural and experimental models by students.

**Experimental Building Unit** - a 15 acre experimental test site located in Poly Canyon, adjacent to the main campus. This unique facility has been used by students since 1968 for the construction and testing of full-size prototype building structures.