MASTER OF SCIENCE IN ARCHITECTURE
(M.S. Arch.)

SPECIAL STUDY AREAS

COMPUTER-AIDED DESIGN

ARCHITECTURAL SCIENCE

FACILITIES MANAGEMENT

**Architecture Department
College of Architecture and Environmental Design
California Polytechnic State University
San Luis Obispo, CA 93407
(April 2005)**

THE MASTER OF SCIENCE IN ARCHITECTURE PROGRAM

The Architecture Department in the College of Architecture and Environmental Design has been offering graduate programs at the Master degree level since 1972.

The M.S. Arch. degree is a minimum one-year (individual students may take 18-24 months) post-professional degree with a focus on advanced areas of specialization within the broader field of Architecture and Environmental Design. It prepares graduates for:

- Entry into the design and construction professions at levels involving greater responsibility and/or requiring advanced knowledge in a particular domain.

- Teaching positions requiring an area of specialization within the disciplines of architecture, construction, architectural engineering and landscape architecture.

- Entry into the Architecture, Engineering and Construction (AEC) industry as a consultant or specialist, serving in the capacity of innovator and facilitator to connect the design disciplines with ancillary industry sectors. Please note that the M.S.Arch. program is not a first professional degree for architectural licensing preparation, but rather a research degree for purposes of specialization.

- Follow-on research and studies at the doctoral level.

- Professional renewal and mid-career changes to take advantage of new opportunities in emerging industrial and professional domains.

By virtue of the polytechnic nature of the University, the areas of specialization that can be supported in the M.S. Arch. program are largely technical. Three special study areas have been consolidated into strong offerings over the past twelve years: Computer-Aided Design, Architectural Science, and Facilities Management.

Each M.S. Arch. student selects a Thesis Committee of at least three professors. While the committee chair must be a faculty member in the Architecture Department, most committees include at least one faculty member from another department or an external professional. For example, students undertaking the Computer-Aided Design special study area often have one faculty member from the Computer Science Department on their Thesis Committee. The Thesis Committee advises the student on all aspects of the selected research study. The Graduate Coordinator advises all of the M.S. Arch. students on matters pertaining to progression through the degree.

<div align="center">**GRADUATE SPECIAL STUDY AREAS**</div>

The following graduate special study areas are offered as focus areas for research culminating in a thesis. Students are encouraged to select a specific topic of research and a Thesis Committee by the end of their first quarter of enrollment in the M.S. Arch. program.

COMPUTER-AIDED DESIGN

The Computer-Aided Design graduate study area focuses on the understanding, development and evaluation of computer-based systems used in the environmental design and related activities. Based on the axiom that few persons understand building design problems better than designers, an educational philosophy has been adopted which assumes that designers need to be directly involved in the development of CAD systems.

Close collaboration between the M.S. Arch. program, the M.S. program in Computer Science and the Collaborative Agent Design Research Center (CADRC) ensures professional relevance through industry contact, and technological innovation through interdisciplinary research and development teams. The majority of the students who participate in the funded projects of the CADRC prepare peer-reviewed publications and attend technical conferences. During the past two decades more than four hundred architecture and computer science students have participated in such industry sponsored projects. Several of these students presented papers at national and international conferences, and some have pursued Ph.D. studies at other universities. Most of the students undertaking the Computer-Aided Design concentration, who are also involved in the funded projects of the Collaborative Agent Design Research Center, are financially assisted.

Applicants to the Computer-Aided Design special study area are normally expected to hold a degree in Architecture, Computer Science, Engineering, or related design discipline, with a strong interest in computer-aided decision making. A working knowledge of at least one computer language is highly desirable. Persons holding a degree in Engineering or one of the Information Systems disciplines may be admitted on the basis of demonstrated knowledge and interest in the field of computer-aided design.

ARCHITECTURAL SCIENCE

Recent advances in design and environmental systems simulation have created the potential for an architectural transformation that reduces the infringement of architecture on the natural environment, while producing a more humane, interactive and comfortable architectural environment. The Architectural Science special study area focuses on this transformation and its implications on theory, design analysis, simulation, and construction.

The location of Cal Poly provides convenient access to various ecosystems and microclimates. Facilities within the College of Architecture and Environmental Design in support of environmental system studies include: Architectural Science Laboratory, Collaborative Agent Design Research Center, and the Multi-Media Presentation and Photographic Laboratory.

Applicants to the Architectural Science special study area are normally expected to hold a degree in Architecture or related design discipline, with a strong interest in architectural science. Persons holding a degree in Engineering or one of the Environmental Design disciplines may be admitted on the basis of a proven record of Environmental Design experience.

FACILITIES MANAGEMENT

This special study area stresses the practice of coordinating the physical workplace with the people and the work of an organization. It integrates the principles of business administration, architecture, and the behavioral and engineering sciences. Facilities Management is concerned with the design, construction, maintenance and management of physical environments. Facilities managers usually work as generalists managing teams of specialists such as architects, interior designers, engineers, construction personnel, communication technicians, and so on.

Major responsibilities of facility managers might include: annual and long range facility planning; facility financial forecasting and budgeting; real estate acquisition, disposal and lease management; interior space planning, workplace specifications, and space management; architectural and engineering planning and design; new construction and/or renovation supervision; maintenance and operations management of the physical facility; telecommunications integration, security and involvement in general administrative services.

After personnel, facilities and their management represent the largest expense of American corporations. Careers in Facilities Management often involve providing direction and advice at the highest corporate level.

Applicants to the Facilities Management special study area are expected to hold an undergraduate degree in Architecture, Interior Design, Construction Management or other related environmental design discipline; or an undergraduate degree and a demonstrated interest in professional practice as a Facilities Manager. A knowledge of environmental control and support systems is highly desirable. Computer application skills are essential. Those without sufficient background will be required to take additional appropriate courses.

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CORE CURRICULUM

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All special study areas require the completion of the following core curriculum courses:

Core Curriculum: 40 units

Research Methods	CRP 513	- 4 units
Architectural Structures	ArcE 522	- 3 units
Arch Design - Decision-Support Systems	Arch 551	- 5 units
Arch Design - Facilities Management	Arch 551	- 5 units
Arch Design - Architectural Science	Arch 551	- 5 units
Advanced Design (Thesis)	Arch 561	- 9 units
Master's Design Project (Thesis)	Arch 598	- 9 units
Special Study Area Directed Electives:		- 5 units
Total Curriculum:		45 units

M.S. ARCH. APPLICATION PROCEDURE

Cal Poly operates on a quarterly schedule with the academic year commencing in the Fall Quarter (September). While applications for Winter Quarter (January) may be accepted, preference will be given to applicants who intend to commence studies at the beginning of the academic year. No applications are accepted for Spring or Summer quarters.

To avoid undue delays in the processing of your application, please ensure that all the required documents are provided to the following two locations:

PART 1:
To be mailed to --->   Office of Admissions and Records
                                Attn: M.S. Arch. Graduate Program
                                Cal Poly University
                                San Luis Obispo, CA 93407

1. Completed CSU Application Form.
2. Filing Fee.
3. Transcripts of all university credits earned.
4. Two letters of recommendation
5. **For foreign students only:**
    a. Proof of university graduation.
    b. Two certified English translations of transcripts of all university courses attempted.
    c. Test of English as a Foreign Language (TOEFL) and Test of Written English (TWE) scores, for applicants whose native language is not English (minimum requirements: TOEFL - 550; TWE - 4.5).
    d. Financial responsibility form.

PART 2:
To be mailed to --->   Architecture Department
                                Attn: Graduate Coordinator
                                Cal Poly University
                                San Luis Obispo, CA 93407

1. Letter of study intent within the Special Study Area selected by the applicant.
2. If available, examples of professional work appropriate to the Special Study Area selected by the applicant.