

College of Architecture and Landscape Architecture

UNIVERSITY OF MINNESOTA

BULLETIN

1992 - 1994



On the cover:

Ali Heshmati, a 1992
outstanding thesis award
winner born in Iran, is now
an American citizen
working with MS&R,
Ltd. Architects.

CALA supports
professional education
and scholarly inquiry
that expands the poetics
of making, reinforces
ecological responsibility,
and demonstrates the
value of design.

MJ

College of Architecture and Landscape Architecture

5	General Information
19	Academic Policies
27	Curriculum
35	Course Descriptions
43	Administration and Faculty
46	Campus Maps
48	Index

Introduction

Resources

This biennial bulletin, the official source of information about the College of Architecture and Landscape Architecture, should be kept handy for repeated reference. In addition, students are urged to become more familiar with the following resources:

College Office—For more information about policies and program requirements check with the College of Architecture and Landscape Architecture, 89 Church Street S.E., 110 Architecture Building, Minneapolis, MN 55455 (612/626-1000).

Program Adviser—The College has a Degree Program Adviser in the Student Affairs Office in 110 Architecture who advises prospective and current students on administrative procedures associated with admission, orientation, registration, scholastic conduct, degree requirements and graduation clearance.

Class Schedule—Each quarter you may pick up a *Class Schedule* with other registration materials in the College of Architecture and Landscape Architecture Office. This publication lists University day school courses with hours, rooms, instructors, prerequisites, registration instructions, tuition and fees, maps, final exam schedules, grading definitions, and other valuable information.

Other Bulletins—Evening and summer courses are featured in the *Continuing Education and Extension Classes Bulletin* and *Summer Session Bulletin*, respectively. Separate bulletins are also published for other University colleges. Most may be obtained from the Office of Admissions, 240 Williamson Hall, Minneapolis campus or the Office of Admissions and Records, 130 Coffey Hall, St. Paul campus.

Policies

Bulletin Use—The contents of this bulletin and other University bulletins, publications, or announcements are subject to change

without notice. University offices can provide current information about possible changes.

Equal Opportunity—The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 420 S.C. 20000e; by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by Executive Order 11246, as amended; by 38 U.S.C. 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 419 Morrill Hall, 100 Church Street S.E., Minneapolis, MN 55455 (612/624-9547).

Access to Student Educational Records—In accordance with regents' policy on access to student records, information about a student generally may not be released to a third party without the student's permission. (Exceptions under the law include state and federal educational and financial aid institutions.) The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, telephone number, dates of enrollment and enrollment termination, college and class, major, adviser, academic awards and honors received, and degrees earned—is considered public or directory information. Students may prevent the

release of public information only during their terms of enrollment. To do so, they must notify the records office on their campus.

Students have the right to review their educational records. The regents' policy, including a directory of student records, is available for review at 150 Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Registrar, 150 Williamson Hall (612/625-5333).

Immunization—Students born after 1956 who take more than one University class are required under Minnesota law to submit an Immunization Record form.

The form, which is sent along with the official University admission letter, must be filled out and returned to Boynton Health Service within 45 days of the first term of enrollment in order for students to continue registering for classes at the University. Complete instructions accompany the form.

Extracurricular Events—No extracurricular events requiring student participation may be scheduled from the beginning of study day to the end of finals week. Exceptions to this policy may be granted by the Senate Committee on Educational Policy. The Senate advises all faculty that any exemption granted pursuant to this policy shall be honored and that students who are unable to complete course requirements during finals week shall be provided an alternative and timely opportunity to do so.

Directory

College Offices

College of Architecture and Landscape Architecture

University of Minnesota
110 Architecture Building
89 Church Street S.E.
Minneapolis, MN 55455
612/626-1000

Degree Program Adviser
612/626-1000

Academic Units

Department of Architecture
110 Architecture Building
89 Church Street S.E.
Minneapolis, MN 55455
612/624-7866

Department of Landscape Architecture
125 Architecture Building
89 Church Street S.E.
Minneapolis, MN 55455
612/625-6860

Design Center for American Urban Landscape (DC/AUL)
320 Wulling Hall
86 Pleasant Street S.E.
Minneapolis, MN 55455
612/626-0333

(In 1993, DC/AUL plans to move to: 1425 University Avenue S.E., Minneapolis, MN 55414.)

Center Offices

Center for Community Studies (CCS)
125 Architecture Building
89 Church Street S.E.
Minneapolis, MN 55455
612/625-6860

Computer-Aided Architectural Design Center (CAAD)
148 Architecture Building
89 Church Street S.E.
Minneapolis, MN 55455
612/624-9583

Minnesota Cold Climate Building Research Center (MnBRC)
1425 University Avenue S.E.
Minneapolis, MN 55414
612/626-7419

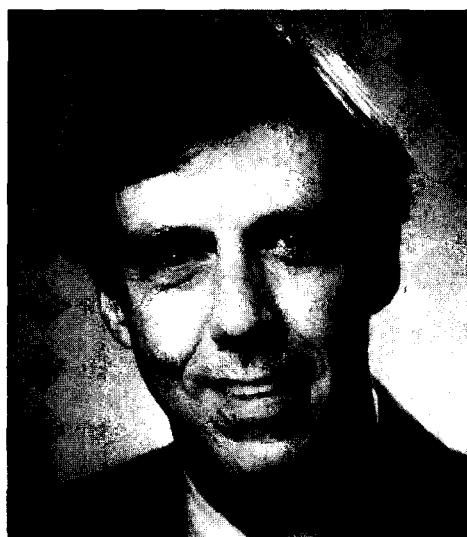
Regional Daylighting Center (RDC)
200 Music Education Building
147 Pillsbury Drive S.E.
Minneapolis, MN 55455
612/624-8349

Welcome

For more than 80 years the University of Minnesota has offered a nationally acclaimed program in architectural education. In the last 25 years the University's program in landscape architecture has achieved a similar recognition for its excellence. In 1986 the Design Center for American Urban Landscape was established. The newly constituted College of Architecture and Landscape Architecture (CALA) brings these disciplines together in a common mission.

The reputation of the college has been built on a faculty that combines leading full-time teachers and scholars with outstanding design practitioners. Throughout its history the educational programs have served as the primary resource base for a vibrant professional design community in the Twin Cities and throughout Minnesota. Our graduates also are recruited and highly prized nationally because of their reputation for outstanding drawing and design skills.

The newly formed College of Architecture and Landscape Architecture now provides a better focus than ever for University of Minnesota students seeking to explore the complex relationship between people and their physical settings. With its departments of architecture and landscape architecture and its Design Center for American Urban Landscape, CALA offers talented and dedicated students the opportunity to develop the potential for excellence and leadership in the design professions, in practice, in teaching, and in research. Through the academic and professional degree programs, students acquire the knowledge, skills, and habits of mind essential to quality design. Studying at CALA, students are exposed to the intellectual discipline, curiosity, and questioning that can form the basis for their entire



professional career. It is our goal to educate professionals who are widely sought for their talent, training, and knowledge and who understand the ethical consequences of their actions.

This bulletin should help introduce the College of Architecture and Landscape Architecture and describe how it provides a physical and intellectual environment for the education of future architects, landscape architects, and urban designers. We hope it will serve you well whether you are a prospective student or one already matriculating. On behalf of the faculty, students, staff, and alumni of the college, I extend to all who use the *CALA Bulletin* a warm and cordial greeting.

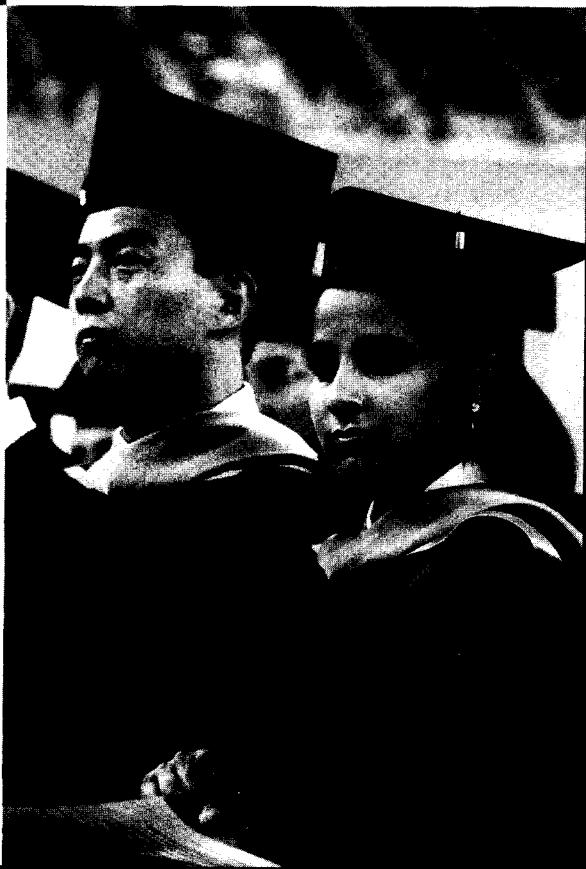
A handwritten signature in black ink, appearing to read "Harrison Fraker".

Harrison Fraker
Dean



College of Architecture and Landscape Architecture

General Information



General Information

History

Although the College of Architecture and Landscape Architecture (CALA) only achieved its collegiate status on July 1, 1989, the first professional degree in architecture was awarded by the University of Minnesota in 1877.

In 1912-13, Frederick Mann was recruited from the University of Illinois to become the first head of a fully constituted Department of Architecture. With Mann's arrival at Minnesota, the College of Mechanic Arts was changed to the College of Engineering and Architecture, setting the stage for 80 years of unbroken educational excellence reaching to the present day. The program grew steadily from 50 students in 1913-14 to 130 students in the early 20s while Mann recruited an outstanding faculty from Harvard, Illinois, Penn, London, and Paris. Thus began Minnesota's great École des Beaux-Arts era.

In 1937, Roy Jones succeeded Frederick Mann as head of the department. This was the same year that Walter Gropius came to Harvard. During this period the University of Minnesota's reputation for outstanding design and drawing continued. Walter Gropius wrote to Jones, complimenting him on the quality of the Minnesota students whom he described as "among the best" that came to Harvard.

In 1954, Ralph Rapson was chosen as the third head of the School of Architecture at Minnesota. Professor Rapson led the school into its well known Modernist era. During his 30 years of leadership the school's reputation for design and drawing grew, with many graduates going on to significant leadership roles in academia and the profession throughout the country.

Professor Rapson's many accomplishments include moving the School of Architecture into its own building and establishing a program in landscape architecture in 1966. At that time, because of landscape architecture's strong ties to the biological sciences and because of the

horticulture department's long-standing offering of courses in garden design and landscape planning, it was decided that administrative and fiscal responsibility for the program would be shared between architecture and horticulture. The first degree in landscape architecture was awarded in 1971. The landscape architecture program has thrived and developed under strong leadership and was granted department status within CALA when the new college was formed.

In 1984, Harrison Fraker was selected as the fourth head of the school. Acknowledging and building on a strong base of accomplishments (both the architecture and landscape architecture professional degree programs are ranked in the top 10% among their respective disciplines in the country), Professor Fraker provided the leadership for the establishment of the Design Center for American Urban Landscape in 1986. Having demonstrated its readiness to assume a greater leadership role in the University and state, the School of Architecture and Landscape Architecture became an independent college. With revitalized curriculum and faculty and new research capabilities, the college demonstrated its ability to serve and address the needs of the state and a vital professional community. These efforts culminated on October 5, 1989, when the College of Architecture and Landscape Architecture was dedicated, with Harrison Fraker as its dean, officially marking the July 1, 1989 establishment of CALA.

Physical and Cultural Setting

When taken together, the Twin Cities of Minneapolis and St. Paul and surrounding metropolitan areas have a combined total population of 2.3 million people living in a dynamic environment that offers both urban and rural experiences and opportunities. The Twin Cities have an expansive offering of cultural attractions. In Minneapolis, theatre, music, dance, and the visual arts are expressed by the work of the Minnesota

Orchestra, the nationally acclaimed Guthrie Theatre, the Walker Art Center, the Minneapolis Institute of Arts, the Minneapolis College of Art and Design, and numerous other galleries, community theatres, and dance companies. St. Paul is home to the St. Paul Chamber Orchestra, the Ordway Theatre, the Minnesota Opera, the Science Museum and Omni Theatre, and myriad other community based theatre, music, art, and dance organizations.

Academic Setting

The University is located at the geographic center of a metropolitan region from which CALA draws great strength. CALA students find a broad range of employment opportunities while in school and professional potential if they remain in the area after graduation. There is access to a wide range of construction sites and many historically significant buildings and landscapes in the area that can be studied by our students.

CALA students are able to find a broad range of intellectual stimulation from other leading departments and programs throughout the University. CALA enjoys close relations with the engineering and science disciplines in the Institute of Technology; with art history, studio arts, anthropology, geography, and other humanities in the College of Liberal Arts; with the Center for Urban and Regional Affairs; with planning in the Humphrey Institute; and with Agricultural Extension activities, forestry, and design, housing, and apparel in the colleges of Agriculture, Natural Resources, and Human Ecology.

Mission

CALA is dedicated to advancing the quality and value of the designed environment. This pursuit addresses fundamental questions about the meaning and experience of people's physical settings. Landscapes, cities, and buildings are the study focus of the college's academic units. Each unit

questions, explores, and seeks to (re)define the organizing principles and practices of its discipline and profession.

Central to CALA's mission is design education. Design is taught as the fundamental means by which architects, landscape architects, and urban designers give shape to and explore their ideas. An effective design education develops: 1) creative powers of generalization and abstraction through analysis and synthesis; 2) a broad understanding of the arts, humanities, and sciences; 3) a knowledge of the principles of the discipline's appropriate technology, history, theory, and professional practice; 4) skills necessary for the description, exploration, evaluation, and development of design ideas; and 5) conviction that appropriate aesthetic and ethical values are an important professional responsibility.

The mission of the college is pursued in the highest academic traditions of the University through: 1) excellence in teaching; 2) the exploration and dissemination of knowledge through scholarship, research, exemplary professional practice, and artistic production; and 3) the advancement and application of professional knowledge and expertise through discipline related service. The mission is also pursued within the guidelines of the National Architectural Accrediting Board, the Association of Collegiate Schools of Architecture, and the Landscape Architectural Accreditation Board.

Administration

CALA is a unit of Arts, Sciences, and Engineering. The college administration is structured to support the overall college mission. The college is organized into a dean's office, academic units, research centers, and a college assembly that acts as a legislative body. The role of each is discussed below.

Dean's Office—The *Dean of the College*, as chief executive officer, has general administrative authority over college affairs. The

General Information

dean's responsibilities include providing overall leadership for academic, administrative, and fiscal policies while interpreting and communicating the college's programs to the University and the community.

Various dean's committees support the college's administration. The *Executive Council*, consisting of the dean, the associate dean, academic unit heads, and the chair of the college assembly, advises the dean on all matters and ensures communication between the dean, the academic unit heads, and the college assembly. A *College Advisory Board* advises the dean on issues of policy related to long-range strategic planning, alumni and professional relations, communications, and fundraising. The board consists of 18 members selected from the professional community and reflects the interests of the academic units.

Academic Units—CALA consists of a Department of Architecture, a Department of Landscape Architecture, and the Design Center for American Urban Landscape.

Each unit has an academic unit head who has general administrative authority over the affairs of the unit. Each head's responsibilities are focused primarily on internal matters of students, faculty, and curriculum. The head provides leadership in developing academic goals and policies related to teaching, research, and service and is responsible for budget procedures that serve these goals and policies.

College Assembly—The CALA *College Assembly* is the policy-making and legislative body that discusses and approves all academic policy initiatives from the dean, the academic unit heads, and the faculty on college assembly committees.

Centers—The following centers provide important research opportunities for faculty and students at all levels, including recent graduates (center addresses and phone numbers are listed on page 3 of this bulletin):

- *Center for Community Studies (CCS)*
- *Computer-Aided Architectural Design Center (CAAD)*
- *Design Center for American Urban Landscape (DC/AUL)*
- *Minnesota Cold Climate Building Research Center (MnBRC)*
- *Regional Daylighting Center (RDC)*

Resources and Facilities

Buildings—The dean's office, department offices, and centers of CALA are located on the East Bank campus in Minneapolis.

In addition to normal classroom, laboratory, studio, and office space, the college also has specialized facilities in the Architecture Building available for student use: 1) the Wood Shop provides tools and equipment for model building to support studio activities; 2) the Photo/Video Lab provides facilities and equipment for photographing models and drawings, slide copy work and video production; 3) the Slide Library houses and maintains our collection of over 100,000 slides; 4) the Audio-Visual Center in the Architecture Library provides slide and video equipment for viewing course and lecture materials as well as the extensive video tape collection of past lectures and presentations given by distinguished teachers and practitioners at the college; 5) the Architecture Library provides full library services for our collection of over 32,000 volumes; and 6) the Computer-aided Architectural Design Center provides general access to a full range of computing systems, including networked student workstations. The lab features 34 Apple Macintosh computers, including 12 Macintosh Quadras. All the Macintoshes are on an AppleTalk network (using Appleshare 3.0) and are bridged to a campus-wide network, which includes mainframes—one of them a Cray supercomputer—as well as a library search system, electronic mail and thousands of other Macintoshes and PCs.

Addition and Renovation—The college received planning money from the state legislature in 1987 to design a major addition and renovation to the Architecture Building. Schematic designs and design development drawings completed by the architectural team of Ellerbe/Becket and Steven Holl have been approved by the Board of Regents. The project will be on the University's capital request to receive construction funds in the 1994 legislative session.

The project will provide the space necessary to unite all the activities of the college. It will provide much needed design studios, classroom/jury rooms, lecture hall, research facilities, faculty offices, administrative offices, student facilities, and an expanded library.

The addition and renovation has been designed to demonstrate basic didactic principles of architecture and landscape architecture. It should make an exemplary and exciting home for the new college.

Current Degrees

Undergraduate—Four undergraduate degrees are offered through CALA. Included are: two accredited professional degrees, the bachelor of architecture (B.Arch.) and the bachelor of landscape architecture (B.L.A.), each requiring a minimum of five years of study; and two non-professional degrees, the bachelor of environmental design in architecture (B.E.D. Arch.) and the bachelor of environmental design in landscape architecture (B.E.D. L.A.). A fifth undergraduate degree awarded through the College of Liberal Arts, the B.A. with a major in architecture, also requires admission to CALA, because the heart of that major—Architecture 3081 through 3093—cannot be taken until students have been accepted by the CALA admissions committee.

Full descriptions of the CALA undergraduate degrees are provided in this bulletin. To learn more about the B.A. with a major in architecture, please consult the *College of Liberal Arts Bulletin*.

Graduate—CALA also has associated with the Graduate School to offer four graduate degrees, two in each discipline. The accredited two-year Master of Architecture (M.Arch.) is a professional degree that serves students who hold a baccalaureate and have completed years one and two of the four-year architectural design sequence. The one-year M.Arch. serves students who already hold the B.Arch. Students seeking the graduate degree in landscape architecture—the M.L.A.—must hold the accredited B.L.A. Thus those who already hold that degree when applying to the Graduate School seek admission to the M.L.A. program. Those who hold a non-landscape architecture baccalaureate seek entry to the joint B.L.A./M.L.A. program. All students in graduate degree programs must be enrolled in the Graduate School.

Proposed Changes in Degree Offerings

CALA is studying significant curricular revisions. New offerings for the professional degrees and new admissions criteria may be approved during the 1992-93 year. If you are considering entry to professional degree studies in architecture or landscape architecture for fall 1993 or later, contact CALA for the most up-to-date information on requirements, opportunities, and procedures.

Special Programs

Study Abroad—In spring quarter CALA sponsors study trips for architecture and landscape architecture students to a variety of locations. In recent years these have included Europe, China, Meso-America, and the American Southwest. Traditionally there is an exhibition of student work from the Study Abroad Program at the beginning of the fall quarter.

Professional Registration

CALA provides the only accredited professional degree programs in Minnesota for architects and landscape architects. Registration as an architect or landscape architect is a legal requirement in order to practice in Minnesota and in most states in the country. Furthermore, a professional license is required before an individual may use the designation of architect or landscape architect in any capacity.

As of 1990, all candidates for professional registration must graduate from a nationally accredited professional degree program (or its foreign equivalent) and complete three years of professional experience to be eligible to take the state registration exam.

For further information concerning professional registration, please contact the Executive Secretary, Minnesota Board of Architecture, Engineering, Land Surveying and Landscape Architecture, 402 Metro Square Building, 7th and Roberts Streets, St. Paul, MN 55101.

Admission

CALA is an upper division college offering professional degrees. Students currently enrolled at the University of Minnesota who are accepted into one of CALA's professional degree programs normally will have completed their pre-architecture or pre-landscape architecture studies through another college at the University. Thus it is very important for students in those colleges to know that before being eligible to take courses in the core design curricula of architecture or landscape architecture (courses starting at the 3081 level) they must be granted admission to CALA.

It is also important for students who do preliminary work at institutions other than the University of Minnesota to realize that CALA admission—whether in architecture or landscape architecture—must also be accompanied by admission to the University.

Freshman Admission—Students in their senior year of high school or those who have a high school degree but have not studied at the college or university level, should seek admission to the University as freshmen by applying through the Office of Admissions, 240 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455. Because admission to CALA does not occur earlier than the start of the sophomore year for architecture and the start of the junior year for landscape architecture, the college designated in that initial application should be the College of Liberal Arts for pre-architecture students and the College of Liberal Arts or College of Agriculture for pre-landscape architecture students.

Students may apply for CALA admission to the B.Arch. degree program during the second quarter of their freshman year provided the completion of all prerequisites can be expected to occur before the fall quarter begins. Those seeking B.E.D., B.A. with a major in architecture, or B.L.A. degrees do not apply to CALA until the second quarter of their sophomore year. When admission to CALA is sought, all application materials must reach the appropriate CALA department office (either architecture or landscape architecture) by the published deadline.

Planning to Transfer?

Minnesota's public colleges and universities are working to make transfer easier. You can help if you PLAN AHEAD, ASK QUESTIONS, and USE PATHWAYS created by transfer agreements.

Preparing for Transfer

If you are currently enrolled in a college or university:

- Discuss your plans with the campus transfer specialist in the CALA Student Affairs Office, 110 Architecture Building, 89 Church Street S.E., Minneapolis, MN 55455.

- Call or visit your intended transfer college. You should obtain the following materials and information:

- college catalog
- transfer brochure
- information on admissions criteria and on materials required for admission (e.g., portfolio, transcripts, test scores). Note that some majors have limited enrollments or their own special requirements such as a higher grade point average.

- information on financial aid (how to apply and by what date)

- After you have reviewed these materials, make an appointment to talk with an adviser/counselor in the college or program you want to enter. Be sure to ask about course transfer and admission criteria.

If you are not currently enrolled in a college or university, you might begin by meeting with a transfer specialist or an admission officer at your intended transfer college to plan the steps you need to take.

Understanding How Transfer of Credit Works

- The receiving college or university decides what credits transfer and whether those credits meet its degree requirements. The accreditation of both your sending and your receiving institution can affect the transfer of the credits you earn.

- Institutions accept credits from courses and programs like those they offer. They look for similarity in course goals, content, and level. “Like” transfers to “like.”

- Not everything that transfers will help you graduate. Baccalaureate degree programs usually count credits in three categories: general education, major/minor courses and prerequisites, and electives. The key question is, “Will your credits fulfill requirements of the degree or program you choose?”

- If you change your career goal or major, you might not be able to complete all degree requirements within the usual number of graduation credits.

Applying for Transfer Admission

- Application for admission is always the first step in transferring. Fill out the application as early as you can prior to the deadline. Enclose the application fee.

- Request that official transcripts be sent from every institution you have attended. You might be required to provide a high school transcript or GED test scores as well.

- Recheck to be certain you supplied the college or university with all the necessary paperwork. Most colleges make no decisions until all required documents are in your file.

- If you have heard nothing from your intended college of transfer after one month, call to check on the status of your application.

- After the college notifies you that you have been accepted for admission, your transcripted credits will be evaluated for transfer. A written evaluation should tell you which courses transfer and which do not. How your courses specifically meet degree requirements may not be decided until you arrive for orientation or have chosen a major.

- If you have questions about your evaluation, call the Office of Admissions and ask to speak with a credit evaluator. Ask why judgments were made about specific courses. Many concerns can be cleared up if you understand why decisions were made. If not satisfied, you can appeal. See “Your Rights as a Transfer Student” below.

Your Rights as a Transfer Student

- A clear, understandable statement of an institution’s transfer policy.

- A fair credit review and an explanation of why credits were or were not accepted.

- A copy of the formal appeals process.

Usual appeals steps are: 1) Student fills out an appeals form. Supplemental information you provide to reviewers—a syllabus, course description, or reading list—can help.

2) Department or committee will review.

3) Student receives, in writing, the outcome

General Information

of the appeal. 4) Student can appeal decision to the CALA Student Affairs Office in 110 Architecture Building.

- At your request, a review of your eligibility for financial aid or scholarships.

For help with your transfer questions or problems, see your campus transfer specialist.

English Proficiency

If English is not your native language, you may be required to take the Test of English as a Foreign Language (TOEFL) or the Michigan English Language Assessment Battery (MELAB). To register for the TOEFL, contact the agency that handles TOEFL registration in your country or write to the Educational Testing Service (Box 899, Princeton, NJ 08540 USA) at least 10 weeks before any scheduled test date. If you are already in the Twin Cities area, you may register for the MELAB with the Minnesota English Center, 320 16th Ave. S.E., University of Minnesota, Minneapolis, MN 55455, or call (612) 624-1503. To register for the MELAB outside the Twin Cities area, contact the English Language Institute, Testing and Certification Division, University of Michigan, Ann Arbor, MI 48109 USA, or call (313) 764-2416.

Application Procedures

Proposed Changes in Degree Offerings

CALA is studying significant curricular revisions. New offerings for the professional degrees and new admissions criteria may be approved during the 1992-93 academic year. If you are considering entry to professional degree studies in architecture or landscape architecture for fall 1993 or later, contact CALA for the most up-to-date information on requirements, opportunities, and procedures.

Department of Architecture Application Procedures

The architecture degree programs (B.E.D., B.A., B.Arch., and M.Arch.) seek students

with demonstrated academic skills, artistic talent, professional orientation, and a commitment to the study of architecture. Above all, successful applicants must show a capacity to think for themselves and to work independently. Like all professionals in a rapidly changing world, applicants should be inquisitive and be receptive to new and different experiences.

Admission to the program is for fall quarter only with consideration for admission normally given to students who have a cumulative grade point average (GPA) of 2.80 or better (on a 4.00 scale). However, a 2.80 GPA does not assure acceptance or rejection; other skills or experiences may on occasion be used to compensate for a lower GPA.

Undergraduate and Pregraduate Architecture Major Applicants—All applications are due by the published deadline for the year in which CALA admission is desired. The following materials must be submitted no later than that date:

- A completed application form (AR110) available from the Department of Architecture in 110 Architecture Building.
- Official transcripts of all coursework at the college, university, or graduate level.
- A portfolio of artwork. This should include examples from a wide range of the applicant's skill in drawing—freehand sketching, studies of light, texture, etc., using various media. Other material such as research papers or creative writing may be submitted. The portfolio with its binder must be no larger than 9 x 12 inches.
- Students are encouraged to submit their most recent ACT, SAT, or GRE examination scores.

Those students who are already enrolled at the University of Minnesota must submit all specified materials directly to the Director of Architecture Admissions, College of Architecture and Landscape Architecture, 110 Architecture Building, University of Minnesota, 89 Church Street S.E., Minneapolis, MN 55455.

Students who are applying to a CALA department and are *not enrolled in the University of Minnesota* also must submit an application for admission to the University (form A360), official transcripts from each postsecondary institution attended, and a photocopy of the architecture admission application (AR110) to the Office of Admissions, 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455 (612/625-2008).

Pregraduate applicants (those with undergraduate degrees in fields other than architecture and no training in architectural design) must follow the undergraduate application procedure outlined above.

Pregraduate applicants do not apply to the Graduate School as part of their initial application to the University.

Pregraduate students who have been admitted to CALA may apply to the Graduate School at any time between the completion of their first year of architectural design and the start of their final year of the architectural design curriculum, but application normally is made during winter quarter of the second year of pregraduate studies. Students must take a minimum of 44 credits in the Graduate School before receiving the M.Arch. as a first professional degree. (However, most students spend six quarters and take between 70 and 80 graduate level credits.)

Graduate Degree Applicants in Architecture—Students who hold an undergraduate degree and have completed at least one year of architectural design at CALA or another accredited school of architecture may seek admission to the Graduate School as candidates for the Master of Architecture as a first professional degree. Applications should normally be submitted by April 1, especially if a teaching assistantship is being sought. Those wishing to receive full consideration for financial aid are advised to apply by January 10 of the year in which admission is desired. The procedure requires the completion of an application to the

Graduate School along with submission of all official transcripts and three letters of recommendation. A portfolio containing recent work in architectural design courses is submitted separately to the graduate program office in the Department of Architecture. Further information on all graduate programs is contained in the *Graduate School Bulletin* available from the Prospective Students Office, Graduate School, 307 Johnston Hall, 101 Pleasant Street S.E., Minneapolis, MN 55455. Graduate application forms may be obtained from the Department of Architecture or the Graduate School.

Transfer and Advanced Standing Applicants—All transfer students must follow the appropriate application procedure outlined in the preceding paragraphs. Students with an undergraduate, nonprofessional degree in architecture such as the B.A. or B.S. with a major in architecture or the B.E.D. may be qualified for application to the graduate program. Transfer credits for architectural courses normally are granted only if they were taken at an accredited school of architecture and are sufficiently similar in subject and difficulty to those taught by the Department of Architecture in CALA. Students seeking advanced standing in architectural design must include examples of recent projects in their portfolio. For credit in other areas of study, students must be prepared to submit course materials (a syllabus, papers, exams, and projects) to be evaluated after their admission to CALA.

Reapplication—Entry to the design sequence in architecture is very competitive. In 1991-92 only one applicant out of four was granted admission. Students not admitted may reapply in a subsequent year. Students should understand that even in reapplication circumstances, the process is still highly competitive. Consultation with an adviser to discuss application improvements is strongly encouraged.

Notification—Undergraduate degree and pregraduate applicants will be notified by letter of the admission decision not later than

General Information

June 1. Those offered admission must notify the Department of Architecture of their intention to attend by July 1 or their place will be forfeited. Those not accepting the opportunity must reapply if they wish to enter the program at a later date.

Department of Landscape Architecture Application Procedures

Proposed Changes in Degree Offerings

CALA is studying significant curricular revisions. New offerings for the professional degrees and new admissions criteria may be approved during the 1992-93 academic year. If you are considering entry to professional degree studies in architecture or landscape architecture for fall 1993 or later, contact CALA for the most up-to-date information on requirements, opportunities, and procedures.

Undergraduate Landscape Architecture Major Applicants

Major Applicants—All applications for undergraduate landscape architecture majors (B.L.A. or B.E.D. in landscape architecture) must be submitted by April 1 of the year of desired entry. Admission is for fall only unless advanced standing in design is granted.

Applications will be considered from students who have completed a minimum of 75 credits of required pre-LA courses, including courses taken in the current quarter. This total must include at least 8 credits in basic communications, 10 credits in physical and biological sciences, 8 credits in mathematics, 16 credits in social sciences, 12 credits in studio arts or design, and 8 credits in landscape architectural, environmental, or design theory. Generally, a student must have a GPA of at least 2.75 for admittance.

The landscape architecture faculty votes on each applicant. The applicant may be admitted, rejected, or recommended for prelandscape architecture status. Approval for admission is based on the following:

- 1) the student's academic standing and GPA;
- 2) the student's maturity and experience;

3) the student's letter of intent; 4) the estimated design potential of the student; and 5) the availability of staff and space.

Applicants are also encouraged to visit the design studios, talk to students who are in the program, and find out as much as they can about the profession.

The following materials must be submitted no later than April 1:

- Completed landscape architecture application (available from the Department of Landscape Architecture in 125 Architecture Building).
- Official transcripts of all coursework at the college, university, or graduate level including coursework currently being taken.
- Letter of intent stating the student's reasons for wanting to be a landscape architect, describing previous experiences in landscape architecture and related fields, and identifying hobbies and life experiences that may relate to landscape architecture.
- Portfolio of art or design work, environmental or design reports, photographs of sculptural work, slides, or similar examples of creative work. It is strongly suggested that the portfolio be a bound 8½ x 11-inch booklet. A portfolio that is larger than 24 x 36 inches will not be accepted. Loose materials are also unacceptable. Any slides must be submitted in an 8½ x 11-inch transparent slide carrier.

Those students who are already enrolled at the University of Minnesota must submit all specified materials directly to the Director of Admissions, Department of Landscape Architecture, 125 Architecture Building, 89 Church Street S.E., University of Minnesota, Minneapolis, MN 55455.

Students who are applying to the Department of Landscape Architecture and have not previously enrolled at the University of Minnesota must also submit an application for admission to the University (form A360), official transcripts from each postsecondary institution attended, and a photocopy of the landscape architecture admissions application to the Office of Admissions, 240 Williamson Hall, University of Minnesota, 231 Pillsbury Drive S.E.,

Minneapolis, MN 55455; or the Office of Admissions, 130 Coffey Hall, University of Minnesota, 1420 Eckles Avenue, St. Paul, MN 55108.

Graduate Degree Applicants in Landscape Architecture—Students who hold baccalaureate degrees may seek entry to the combined B.L.A./M.L.A. degree program. Students with accredited professional degrees in landscape architecture may seek admission to the M.L.A. program.

Applications for B.L.A./M.L.A. admission will be accepted at any time. However, to receive full consideration for financial aid and to ensure the best chance of securing a position, applications should be received by January 16 of the year in which admission is desired. Applicants will be admitted to the B.L.A./M.L.A. track only in the fall quarter. Applicants with accredited professional degrees in landscape architecture and applicants granted advanced standing in design may be admitted in other terms. Applications are made in two parts:

Send to the Graduate School:

1. Completed Graduate School Application (white form).
2. Official transcripts for *each* college attended.
3. The Graduate School Application fee.

Send to the Director of Graduate Studies in care of the Department of Landscape Architecture:

1. Letter of intent. This letter should describe how and why you have chosen to pursue a degree in landscape architecture. It should especially describe your interest in advancing scholarship in landscape architecture, which is the focus of the graduate program.
2. Three letters of reference. At least one should be from a former teacher. Others may include employers, people with whom you have worked on volunteer projects, etc. These should be from people who know you through your work.
3. Copies of your transcripts (need not be official, may be photocopies).

4. Applicants with previous professional degrees in landscape architecture and applicants seeking advanced standing should also submit a portfolio of professional work. A portfolio is not required for normal admission to the B.L.A./M.L.A. track.

Further information on all graduate programs is contained in the *Graduate School Bulletin* available from the Prospective Students Office, Graduate School, 307 Johnston Hall, 101 Pleasant Street S.E., Minneapolis, MN 55455. Graduate application forms may be obtained from the Department of Landscape Architecture or the Graduate School.

Reapplication—It is important for applicants to realize that a person who is unsuccessful on a first attempt may be admitted on a second attempt, especially if the GPA can be raised, the portfolio improved, and more support courses added to the record. Students who are not admitted are urged to consult an adviser about reapplication in the next year.

Notification—Applicants will be notified by letter of the admission decision no later than June 1. Those offered admission must notify the Department of Landscape Architecture head of their intention to attend by July 1, or their place will be forfeited. Those not accepting the opportunity must reapply if they wish to enter the program at a later date.

Financial Aid

University—The University offers three general types of financial aid to undergraduates: scholarships and grants, student loans, and college work-study. A student employment service to help students find jobs is also available. For more information, contact the Office of Student Financial Aid on the Minneapolis campus at 210 Fraser Hall, University of Minnesota, 106 Pleasant Street, S.E., Minneapolis, MN 55455 (612/624-1665) or on the St. Paul campus at 197 Coffey Hall, 1420 Eckles Avenue, St. Paul, MN 55108.

CALA Opportunities and Awards

Scholarships and Honor Awards—Each year CALA directly or indirectly participates in awarding many prizes to its students. Many of these include cash stipends.

AIA Foundation Scholarships—stipends awarded to architecture students on the basis of financial need and academic achievement. Nominations are made by CALA to the AIA Foundation.

AIA Henry Adams Medal and Certificate—awarded to the two graduating architecture students highest in academic ranking.

AIA Minority-Disadvantaged Scholarship Program—awarded to architecture students based upon need and background. Nominations are made by CALA to the AIA.

AIA-Minneapolis Chapter—two stipends for third year architecture students who do not qualify for other awards.

Alpha Rho Chi Medal—given to a graduating architecture student for leadership and service.

Thomas Ellerbe Fellowship—stipend awarded to architecture students in their final year by Ellerbe Associates based on academic record, portfolio, and recommendations.

SPQR Award—stipend awarded to architecture students for participating in the Study Abroad Program based on need and academic rank.

Stanley and Doris Moe Scholarship—offered to outstanding applicants to the department of architecture at the time of their admission.

Stretch/Morrill Memorial Award—thesis award for graduating undergraduates in the department of architecture nominated by faculty.

In addition, several corporations sponsor architectural design competitions (with financial awards) as part of design studios. Recent sponsors have included Minnegasco, Pella, and the Prestressed Concrete Institute.

Landscape Architecture students may apply for the *Toro Corporation Award for Excellence in the Study of Landscape*

Technology. Graduate students may also apply for the *Edmund J. Phelps Graduate Fellowship in Landscape Architecture*. Numerous research and teaching assistantships are awarded to qualified graduate and undergraduate students. The Department of Landscape Architecture also administers a program of undergraduate scholarship assistance to qualified students.

Publications

CALA supports a number of newsletters, journals, and other publications to serve various constituencies.

CALA News—Published three times a year for alumni and friends. *CALA News* contains feature articles about important developments at CALA, along with brief summaries of activities involving alumni, donors, faculty, students, and staff.

Midgard—A monograph series devoted to topics in architectural theory and criticism. CALA established *Midgard* as a scholarly monograph to foster the presentation, exchange, and kindling of ideas on architecture and landscape architecture theory and practice. Volume 1, Number 1 was published in the fall of 1987 with the second volume on typology published in 1991. Subsequent issues on the relationship between philosophy and architecture, and on landscape architecture theory are in various stages of publication development.

WORKS—Exemplary student projects from architecture and landscape architecture design studios are selected for inclusion in this annual student publication, along with a brief description of studio pedagogy. Traditionally, the special emphases of the spring quarter study abroad programs are featured in words and sketches. Under the leadership of a student editor, *WORKS* has been published since 1985. Its contents give an important glimpse into the design activity at a college known internationally as an outstanding center for design.

Center Publications—In addition to the publications outlined above, the various research centers and departments in the college publish information related to their specific activities and initiatives. For more information, please contact the center or department directly. (See the directory section of this bulletin for a listing of addresses and phone numbers.)

Visiting Lecturers and Critics

Ideas from internationally and nationally known practitioners and educators in both landscape architecture and architecture are contributed to CALA through the CALA Visiting Lecturers Series. Aided by funding from alumni and supportive professionals, the college typically brings five distinguished lecturers per quarter to address students, faculty, and interested practitioners on topics of educational importance.

Complementing the CALA Visiting Lecturer Series are lecturers invited by such CALA centers as MnBRC (Minnesota Cold Climate Building Research Center); DC/AUL (Design Center for American Urban Landscape); RDC (the Regional Daylighting Center), and lectures presented in connection with new position searches.

CALA has received funding that supports outstanding scholars in both landscape architecture and architecture for up to a full quarter of residency under the recently created H.W.S. Cleveland and Cass Gilbert chairs. These visitors typically conduct seminars, give lectures, and, when appropriate, participate in design studio reviews.

Students also enjoy access to design criticisms by local and regional educators and practitioners offered in the end-of-the-quarter reviews.

Continuing Education

CALA offers selected preprofessional and professional courses through evening classes in Continuing Education and Extension. Continuing Professional Education courses and reviews for the architectural registration

examination also are offered. Consult the *Extension Classes Bulletin* for further information.

Student Activities

Student Organizations

Membership and participation in student organizations can add a valuable dimension to an academic career and can contribute much to professional development. Check with the college office for further information.

American Institute of Architecture Students (AIAS)—This group, which is affiliated with the American Institute of Architects, helps to keep students aware of current issues within the field of architecture. The group is involved in various activities including the lecture series, competitions, design charettes, social activities, and portfolio workshops. It provides an excellent connection to the profession.

Minnesota Chapter of the American Society of Landscape Architecture Students (MASLAS)

Students (MASLAS)—This group, which is affiliated with the American Society of Landscape Architects, helps keep students aware of current issues within the field of landscape architecture. The group is involved in various activities including the lecture series, competitions, design charettes, social activities, and portfolio workshops. It provides an excellent connection to the profession.

Student Services

CALA Student Affairs Office—Prospective and current students can discuss questions or problems with the CALA degree program adviser or a member of the department advising staff. Appointments can be made in the college office or by phone at 612/624-7866 (for architecture) or 612/625-6860 (for landscape architecture).

The CALA Student Affairs Office provides information on the administrative

General Information

procedures related to admissions, orientation, registration, scholastic conduct, degree requirements, and graduation clearance.

Advisers—Departments use a combination of faculty and staff advisers.

Architecture students may choose a specific adviser or may seek advice from the faculty and staff members assigned to advising. Appointments may be scheduled with the student support services staff in 110 Architecture Building. Students are responsible for monitoring their degree program requirements and should meet with an adviser whenever they have questions or concerns.

Landscape architecture students are assigned an adviser following admission. The assigned adviser will handle any questions or concerns of the student throughout the program or until another adviser is designated.

Career Planning and Placement—The departments have had a long history of close association with their respective professional communities. Part of the link between the students and the professions has been created by the 800-hour professional work requirement that is mandatory before thesis in architecture and strongly recommended in landscape architecture. These relationships with the two professions have expanded recently through such efforts as the Intern Development Program (IDP) in architecture.

Services for Students with Disabilities—The University strives to provide the best educational opportunities for all students, including those with physical, sensory, learning, and psychological disabilities. The University recognizes that disabled students sometimes have unique needs that must be met for them to have access to campus programs and facilities. University policy calls for accommodations to be made on an individualized and flexible basis, but it is the responsibility of students to seek help and to make their needs known. Disabled students

can receive help from the *Office for Students with Disabilities* (624-4037, voice or TDD), *Learning and Academic Skills Center*, and the *Speech and Hearing Clinic*.

All-University Student Services—

Numerous specialized services are provided by the University for all students. See the *University of Minnesota Student/Staff Directory* for listings of offices and units that offer specific services, including:

Boynton Health Service

Counseling

Housing Office

International Student Adviser's Office

Libraries

Minority and Special Student Affairs

Office for Students with Disabilities

Office of Student Financial Aid

Placement Offices

Recreational Sports

St. Paul Health Service

Student Employment Service

Student Legal Service

Student Ombuds Service

Student Organization Development Center

Veterans Programs

College of Architecture and Landscape Architecture

Academic Policies



Academic Policies

Registration

Each new CALA student is invited to an orientation-registration program. This program offers general information about CALA and the University and gives students the opportunity to meet with faculty in their chosen major and to receive help in the course selection and registration process.

The responsibility for accurate, timely registration and tuition payment rests with the student. Copying errors, excessive changes, failure to observe procedures, and late registration and payment can be costly and time consuming for students.

Special Registration Procedures—Certain special registration procedures allow students to audit courses, take them as independent study or reading courses, or take them for extra credit. Additional registration instructions can be found in the *Class Schedule*.

Auditing—Auditors attend and complete all work for a course, but do not take the final examination or receive credit. Audited courses may be taken for a grade and credit at a later time. An auditor must officially enroll in a course and pay regular tuition and fees. Both the major department and course instructor must approve an audit registration.

Independent Study—Students have two options for earning credit through independent study.

One method is to take a course without attending classes. Students pay the usual tuition and fees for the course, meet all deadlines, and take the final examination at the regular time. All usual regulations concerning grades, incompletes, and cancellations apply. A course completed under independent study counts as part of the total credit load for the quarter. Check with the department offering the course concerning permission to take it via independent study. Students need approval from the course instructor and major department on a registration override permit.

A second option is to take a course from the Department of Independent Study, which offers correspondence courses through Continuing Education and Extension. See the *Independent Study Bulletin* for further information.

Credit by Special Examination—In some University courses, students may request an examination (or other evaluation). If students pass the examination, they will receive credit for the course. Students must pay a fee for each examination attempted. Check with the college office for further information and for Request for Special Examination forms.

Extra Credit—With the course instructor and major department's approval, an additional one to three credits may be earned in a course a student is taking or has taken. For example, a course topic may be intensively explored or extended to a related topic. Students do the extra work on their own, according to standards set by the instructor. Students need the course instructor and major department's approval on a registration override permit.

Cancel-Add Procedures—Students use a Course Request, available in the *Class Schedule* or from their department office, to change registration. All such changes should be made as early as possible in the quarter.

Cancel—Students who cancel a course, are subject to the following procedures and requirements:

- Cancellations during the first two weeks of a quarter do not require approval; the course is deleted from the student's record.
- Cancellations during the third through sixth weeks of the quarter do not require approval; a W is assigned.
- Withdrawal from a course after the sixth week of a quarter is strongly discouraged unless there are extenuating circumstances. Cancellations after the sixth week are by petition only and require instructor, department Director of Undergraduate Studies, and CALA Academic Standards and Student

Affairs Committee representative approval on the Course Request. *Cancellations during the ninth and tenth week of a quarter are seldom approved by the CALA Academic Standards and Student Affairs Committee.* If a cancellation is approved, a W is assigned.

Add—Approval is not required to add a class during the first week of a quarter. During the second week of the quarter students must have the instructor's permission to add a class. After the second week of the quarter, adding a course is by petition only and requires the signature of the instructor, department Director of Undergraduate Studies, and a CALA Academic Standards and Students Affairs Committee designee. *Approval after the eighth week of the quarter is rarely granted.*

Grading Change—A change from one grading system selected for a course to another (e.g., from A-F to S-N) must be made during the *first two weeks of a quarter*. The choice of grading system *may not be changed after the end of the second week.*

Cancellation of Entire Registration—Students who leave the University before the end of a quarter must cancel their registration when they stop attending classes. Submit a Course Request for cancellation of the entire registration to the Registration Center, 202 Fraser Hall, or to the Office of Admissions and Records, 130 Coffey Hall. Cancellations are effective the day they are processed. Refunds are based on the date students officially cancel. Students are entitled to a full refund if they cancel before the first day of classes. Contact Admissions for current refund information.

Repeating Courses—Students are allowed to repeat courses in which they receive a grade of D or less, and only the last grade earned is then used in computing their GPA. Students are not allowed to repeat courses in which they receive a grade of C or better.

Petition Procedures

Petitions are required for departures from either college or major requirements. Petitions should be submitted to the CALA Student Affairs office. A successful petition requires both college and department approval.

To substitute another course for a requirement, the petition must be approved *before* the student registers for the course. Students should always check to be sure their petitions are approved.

Petition forms are available from either the CALA Student Affairs or department offices.

Credits and Attendance

Advanced Placement—The Advanced Placement (AP) program of the College Board provides a way for high schools to offer college-level studies to their more advanced students and for those students to demonstrate satisfactory achievement in those studies. Through this program students may earn college credit, exemption from requirements, or placement in advanced courses when they enroll in college. For more information, contact the Office of Admissions, 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455 (612/625-2008).

College Level Examination Program—An alternative method of earning credit is through the College Level Examination Program (CLEP). Inquire at the CALA office for information.

Course Load—The typical course load per quarter is 14 to 18 credits. A credit requires an average of three hours of work each week. To carry more than 18 credits, a B average (i.e., a cumulative GPA of not less than 3.00) is required. To carry more than 21 credits, a B average (3.00 GPA) and permission from an Academic Standards and Student Affairs Committee designee are

Academic Policies

required. Undergraduates must carry at least 12 credits each quarter to be considered full-time students (15 credits is considered full time for State of Minnesota financial aid programs).

Class Attendance—Attendance for all scheduled classes in CALA is encouraged and in some cases is compulsory. Students who miss a class for a valid reason may request the instructor's assistance in making up the work missed, but instructors are under no obligation to give assistance if the absence is not justifiable or if the request cannot reasonably be accommodated.

The following four situations are accepted by instructors as justifiable reasons for absence from class and for a request for assistance in making up work: (a) illnesses certified by the University Health Service or by the student's family physician; (b) emergencies caused by a death or serious illness in the immediate family; (c) absences approved by the Academic Standards and Student Affairs Committee; and (d) participation, certified by the Office of Student Affairs, in University-approved, co-curricular activities.

To make up coursework, students should confer directly with their instructors. The CALA Academic Standards and Student Affairs Committee representative intervenes only when emergencies are involved.

Credits in Graduate School—Students who lack no more than 9 credits toward their bachelor's degree may apply for admission to the Graduate School. During their first quarter in the Graduate School, they would normally complete the credits necessary for the bachelor's degree. Graduate-level work applied to the graduate degree may not also be applied to the bachelor's degree.

Residency Requirement—CALA baccalaureate degree candidates must be enrolled in the college while taking all their professional degree courses at the University. Undergraduate students must complete their last 40 credits while enrolled in good standing in CALA.

Grading

Grading System and Grade Point Average—University academic achievement is graded under two systems: A-F and S-N. Choice of grading system and course level (1xxx/3xxx/5xxx) is indicated on registration forms; changes may not be made after the second week of the quarter. Some courses may be taken under only one system; limitations are identified in the course listings. The architecture department and the landscape architecture department both require A-F registration in all required major courses. University regulations prescribe the grades that will be reported on your transcript to be as follows:

A—Achievement that is outstanding relative to the level necessary to meet course requirements.

B—Achievement significantly above the level necessary to meet course requirements.

C—Achievement that meets the basic course requirements in every respect.

D—Achievement worthy of credit even though it does not fully meet the basic course requirements in every respect.

F—Performance that fails to meet the basic course requirements.

S—Achievement satisfactory to the instructor for the program in which you are registered. This definition implies that standards for an S may vary from one program to another. The S is not figured into the GPA.

N—No credit. Before fall 1986, this symbol was assigned to students not earning an S or at least a D on the A, B, C, D, N grade base. Its use is now restricted to students not earning an S on the S-N grade base.

Only credits taken on the A-F grading system are calculated in the GPA. A GPA of 2.00 or better is considered satisfactory work. Each letter grade carries the following grade points per credit: A = 4.00, B = 3.00, C = 2.00, D = 1.00, and F = 0.00. The GPA is determined by dividing the sum of the grade points earned by the sum of the credits completed.

S-N Grading Option—A CALA student can elect the S-N grading option for any course offered on an S-N basis except those specifically designated by the student's major department to be taken on an A-F basis only.

New students in CALA may take only one course on S-N grading during their first quarter in residence (in addition to any course available only S-N). A CALA student may take no more than two courses per quarter or one course per summer term on S-N grading.

No more than 25 percent of the total University of Minnesota residence credit presented for graduation for a given curriculum may be taken S-N. This regulation does not apply to credits presented in excess of the minimum required.

If all other requirements and regulations are met, a student may change from A-F to S-N or from S-N to A-F through the second week of a quarter but not thereafter. A change from or to S-N registration in a given course must be made on a Course Request.

Incompletes—An I is assigned only when a student has completed all but a small portion of the work of a course and has made prior arrangements with the instructor to make up the work. An incomplete will become an F (A-F grading) or an N (S-N grading) if not made up by the end of the next quarter in residence.

Withdrawals—A W indicates official cancellation of a class without a grade. For complete details refer to the Cancel-Add Procedure section of this bulletin.

Auditing—A V indicates that the student is a visitor or an auditor in a course and is taking it without credit. For complete details refer to the Special Registration Procedures section of this bulletin.

Continuation Courses—An X is reported in continuation courses in which a grade is not assigned until the entire sequence is completed. Upon completion of the sequence, a grade is submitted for each X on the academic transcript.

Academic Progress

Students are expected to make satisfactory progress toward their degree objectives. This usually means earning grades of A, B, C, or S in most courses and completing courses undertaken. For students with concerns about their academic progress, early consultation with instructors and/or a faculty adviser is recommended.

CALA evaluates academic progress and scholastic standing using quarterly and cumulative GPA reviews as well as an annually calculated coefficient of completion. Undergraduate students are expected to maintain a quarterly and cumulative GPA of 2.00 or above and to successfully complete at least 75% of the courses undertaken during the academic year. The formula for determining the annual coefficient of completion (cc) is as follows:

$$cc = \frac{\text{credits with grade of A, B, C, or S}}{\text{total credits of A, B, C, D, F, S, N, I or blank}}$$

For purposes of calculating the coefficient of completion, the academic year is defined as summer session I through spring quarter.

Scholastic Difficulty

CALA recognizes two levels of academic probation (probation and final quarter notice). In addition the college uses a dropped status (suspension) for students on final quarter notice who have not improved their scholastic deficiencies.

A student who presents a quarterly or cumulative GPA of less than 2.00 but greater than 1.50 or who does not successfully complete 75 percent or more of coursework undertaken during the academic year will be placed on probation with a registration hold entered on the record. A student who presents a quarterly or cumulative GPA of less than 1.50 will be placed directly on final quarter notice with a registration hold entered on the record.

Academic Policies

Academic Probation—Students on academic probation are required to meet with an adviser, usually the Director of Undergraduate Studies in their major department, but will be issued an override to register at the normal time.

A student on probation who presents a quarterly and cumulative GPA of 2.00 or greater will be removed from probation. A student who presents a quarterly GPA of 2.00 or greater but a cumulative GPA of less than 2.00 will remain on probation. A student on probation who presents a quarterly GPA of less than 2.0 will be placed on final quarter notice.

Final Quarter Notice—Students on final quarter notice are required to meet with an academic adviser, again usually the Director of Undergraduate Studies in their major department, to forge a specific performance contract. Students on final quarter notice are not allowed to register for subsequent quarters until the grades for the current quarter are known.

A student on final quarter notice who has met all the conditions of the performance contract, has received grades of C or above in all courses undertaken and presents a cumulative GPA of 2.00 or above will be removed from probation. A student who has met all of the conditions of the performance contract, received grades of C or above in all courses undertaken but has a cumulative GPA of less than 2.00 will be returned to probation. A student on final quarter notice who presents a quarterly GPA of less than 2.00 will be dropped (suspended) from CALA.

Suspension—Suspended students may not re-enter day school or take CALA evening classes through Continuing Education and Extension unless granted permission by the major department and the Scholastic Standards and Academic Affairs Committee. Suspended students interested in taking classes through Continuing Education and Extension should contact the CALA Student Affairs Office in 110 Architecture Building for procedural details.

Written appeals may be submitted by students who believe an explanation of their situation or additional information had bearing on their academic performance and therefore may influence the suspension decision. The Scholastic Standards and Academic Affairs Committee will review all appeals. Suspensions are usually rescinded only when the committee is convinced that there are extenuating circumstances and changes in the student's academic performance are highly probable.

Students considering appealing their suspension should contact the CALA Student Affairs Office in 110 Architecture Building for forms and information on the appeals process. To be considered, a written appeal must be received within six weeks of suspension notification.

Reapplication After Suspension—Suspended students may not reapply for admission to CALA for at least one year. Readmission requires approval from the major department and the Academic Standards and Student Affairs Committee. Readmission is on a space available basis providing the committee has been persuaded that the factors leading to the suspension have been corrected and the prospects for improved work in the future are strong.

Readmitted students are placed on final quarter notice and are subject to immediate suspension if work becomes unsatisfactory (i.e., if the conditions of the performance contract are not met).

Dean's List

The Dean's List is published at the end of fall, winter, and spring quarters. Undergraduates whose quarterly academic performance results in a GPA of 3.50 or above qualify for the Dean's List for that quarter. Students must complete at least 12 credits on A-F grading in the quarter to be eligible.

Conduct and Discipline

CALA expects the highest standard of honesty and integrity in the academic performance of its students. Any act of scholastic dishonesty is regarded as a serious offense and may result in some form of discipline up to and including expulsion. The college has broadly defined scholastic dishonesty as any act that violates the rights of another student in academic work or that involves misrepresentation of a student's own work. Scholastic dishonesty includes, but is not necessarily limited to: submission of false records of academic achievement; cheating on assignments or examinations; plagiarizing; altering, forging, or misusing a University academic record; taking, acquiring, or using test materials without faculty permission; acting alone or in cooperation with another to falsify records or to dishonestly obtain grades, honors, awards, or professional endorsement; depriving another student of necessary course materials; interfering with another student's work; and submitting the same paper or substantially similar papers to meet the requirements of more than one course without the express approval of all instructors concerned. Aiding and abetting a student in an act of scholastic dishonesty is also considered a serious offense.

When a case of scholastic dishonesty arises, the CALA faculty member who is the instructor for the course may modify the grade for the exam or piece of work in question or the course grade, or may refer the incident to the department head or the appropriate committee. In any case, the instructor must report the incident and the action he or she takes to the department and the college. At the time of the action, the student is informed by the instructor of his or her right to ask for a hearing by the committee dealing with student conduct cases. Information on this process is available from the college office.

A student has the right to a hearing and to appeal any disciplinary action taken by an instructor. Appeals of decisions that are

nonacademic or cases that involve two or more colleges are referred to the Campus Committee on Student Behavior (612/624-6073).

If a student's infraction involves both CALA judicial proceedings and court proceedings and if a CALA decision might prejudice the court case, CALA will hold its decision in abeyance until the court proceedings have been concluded.

Grievances

Students with complaints or criticisms about courses or academic policies have recourse through grievance procedures. They are expected to first confer with the course instructor. If no satisfactory solution is reached, the complaint should be presented to the department head. If these informal processes fail, a department-level committee will hear the evidence. Further appeals go to college-level and University-level committees. The CALA degree program adviser in 110 Architecture is a competent source for interpreting college procedures or regulations and can often suggest suitable alternatives to solve a problem.

Graduation Requirements

Bachelor's Degrees—For students currently in the programs, CALA administers graduation requirements for the following degrees: B.Arch. and B.E.D. in architecture; and B.L.A. and B.E.D. in landscape architecture. Candidates will be recommended for graduation after they:

1. Complete the prescribed curriculum, including required and elective courses to meet the total number of credits required;
2. Earn a minimum cumulative GPA of 2.00 overall and in their major;
3. Complete the necessary paperwork and meet the application deadlines. Two quarters before the expected graduation date, students should have an approved graduation checksheet on file with their department and the college office. In addition, students must

Academic Policies

turn in their graduation application and fee to 150 Williamson Hall or 130 Coffey Hall.
(Deadline extensions are not granted.)

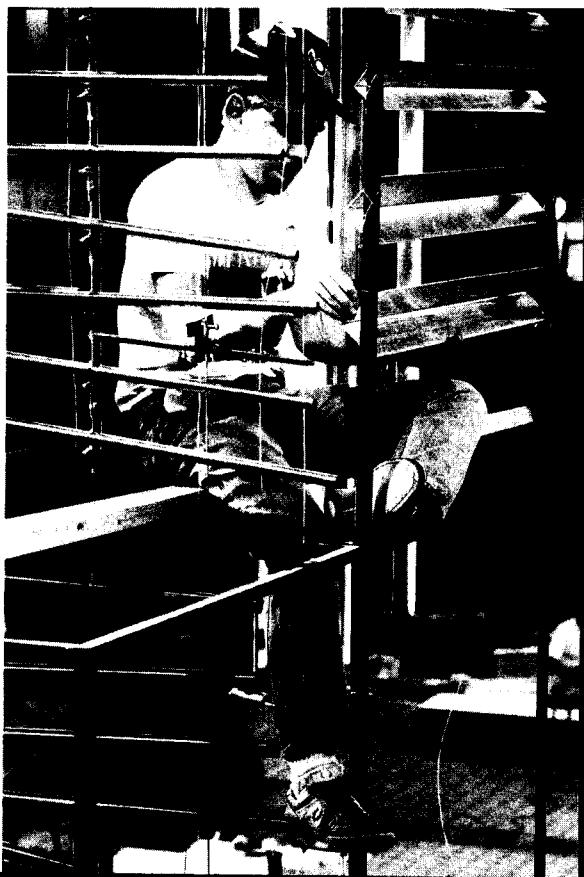
The Graduate School grants the M.Arch. and the M.L.A. The College of Liberal Arts (CLA) grants the B.A. degree with a major in architecture, although CALA cooperates with CLA in setting major requirements for the degree and students cannot major in architecture in CLA unless they have been admitted by CALA. Students should check with the appropriate student affairs office for procedural information on Graduate School or CLA graduation.

Graduation With Distinction and High Distinction—Undergraduates with a GPA of 3.50 or above will graduate “with distinction” and students with a GPA of 3.80 or above will graduate with “high distinction.” Students graduating with distinction or high distinction receive medals marking this honor.

The GPA calculation used to determine eligibility for graduation with distinction and high distinction is based on the last 90 credits earned before graduation.

College of Architecture and Landscape Architecture

Curriculum



Curriculum

General Education Requirements

The University of Minnesota requires all students receiving a bachelor's degree to take general education courses. These courses help students become proficient in writing, acquaint them with the means by which knowledge is acquired and communicated, help them better understand themselves and their environment, increase their historical and philosophical perspective on the nature and relationships of individual and society, and help them appreciate the value of the arts and literature in interpreting life and nature.

CALA, through its mission, has articulated the belief that excellence in professional education requires a broad general education and supports fully the guidelines and definitions of the All-University Council on Liberal Education.

Breadth is assured by requiring students to take a minimum number of credits in each of four areas, including: Group A (Language, Logic, Mathematics, and the Study of Argument); Group B (The Physical and Biological Universe); Group C (The Individual and Society); and Group D (Literary and Artistic Expression).

CALA has established minimum general education requirements that conform to the guidelines set by the All-University Council on Liberal Education. Each CALA department has established its own general education requirements, which meet or exceed the college minimums. Students will meet their general education obligation by fulfilling the specific curriculum requirements of each department. Students should therefore refer to the specific curriculum requirements of their major (listed on pages 30-34).

Architecture

In its educational philosophy the Department of Architecture is concerned with the design of the total environment and with the education of the total human being. The major in architecture combines the study of history, science and technology, the humanities, and the arts to provide the intellectual background and skill necessary to pursue careers in architecture. Two undergraduate nonprofessional degrees are offered, a four-year program leading to a B.A. degree with a major in architecture granted by the College of Liberal Arts (see the *College of Liberal Arts Bulletin*), and a four-year program leading to a B.E.D. degree in environmental design granted through CALA. Also offered are two accredited professional degrees, the B.Arch., an undergraduate professional degree granted through CALA, and the M.Arch., a graduate professional degree program offered through the Graduate School for students who have either a nonprofessional degree such as the B.E.D., the B.A. or B.S. with a major in architecture, or another baccalaureate degree plus added studies equal in scope to those of the nonprofessional degree.

Professional Degrees—Both of the professional degree programs are accredited by the National Architectural Accrediting Board, an affiliate of the National Council for Architectural Registration Boards, the American Institute of Architects, and the Association of Collegiate Schools of Architecture. Registration to practice architecture in Minnesota requires a professional degree, either the B.Arch. or the M.Arch.

Bachelor of Architecture (B.Arch.)—This degree normally requires one year of pre-architecture work, acceptance to CALA, and four years of study after admission. Students must complete a minimum of 244 credits of required and elective work as described on pages 30-31.

A thesis is presented at the completion of the fourth year of the architectural design sequence. Students should complete their graduation checksheet two quarters before registering for the thesis. In addition, before beginning the thesis, students must present evidence that they have completed a minimum of 800 hours of practical experience in an architectural or planning office and have finished all required coursework.

Master of Architecture (M.Arch.)—The M.Arch. degree is open to students who meet the entrance requirements of both the Graduate School and CALA. Candidates holding a nonprofessional degree in architecture must have completed an undergraduate degree with at least two years of architectural design studies at a level equivalent to those of the B.E.D. If admitted to the Graduate School and CALA, they can expect to complete two more years in architectural design, an individual program, and a thesis. Students holding a B.A. or B.S. degree in majors other than architecture normally will complete four years of professional education study, including two years as a pregraduate in the undergraduate program and two years in the Graduate School. See the *Graduate School Bulletin* or the director of graduate studies in architecture for details.

Nonprofessional Degrees—The B.E.D. and the B.A. with a major in architecture provide an introduction to the study of architecture in the context of a liberal education while preparing students for graduate study leading to the professional M.Arch. degree or related careers in planning, urban design, development, or historic preservation. The B.E.D. and B.A. are not recognized by the state of Minnesota or the professional community as sufficient to practice architecture. Nonprofessional degree majors wishing to receive the professional degree apply to the Graduate School or continue the B.Arch. curriculum in CALA upon completion of the second year of architectural design (Arch 3091-3092-3093).

Bachelor of Arts (B.A. with a major in architecture)—This four-year degree granted by the College of Liberal Arts normally requires two years of pre-architecture coursework, acceptance to CALA, and two more years of coursework in the major (architecture). Students must complete 180 credits of required and elective work in the following core areas: two years of architectural design studio (Arch 3081-3082-3083, 3091-3092-3093), one drawing course, three upper division history courses (Arch 5051-5067) and Arch 3060 in addition to CLA's electives, second language, cultural pluralism, and world studies degree requirements. Upon completion of the B.A. degree, students may: (a) apply for admission to graduate study in architecture leading to the M.Arch. degree; or (b) after two additional years of study in CALA, earn the B.Arch. degree. Introductory technical coursework in structures, construction, and environmental controls is required before advanced work toward the M.Arch. or B.Arch. can begin.

Bachelor of Environmental Design (B.E.D.-Arch.)—This degree normally requires two years of pre-environmental design work, acceptance to CALA, and two more years of coursework. Students must complete a minimum of 192 credits of required and elective work in the following core areas: two years of architectural design, 18 credits of environmental design electives, drawing, history, structures, building construction, and environmental control technologies. This curriculum prepares students for application for graduate study in architecture leading to the M.Arch. degree or for transfer into other disciplines such as urban design, city and regional planning, product design, or related fields.

Course Requirements—The one-year pre-architecture curriculum must be completed by all students seeking admission to one of the architecture majors, although most students have completed at least two years of college or university study before beginning their architectural design coursework.

Curriculum

In all CALA undergraduate degree programs, each required course must be passed with a minimum grade of C.

The department will consider substitutions for any required courses in the curriculum upon petition to the director of undergraduate studies. Permission for a substitution must be requested before the quarter in which the required course normally would be taken.

General Education

Students completing either the B.E.D. in architecture or the B.Arch. degree must complete a minimum of 36 credits of general education courses distributed between English composition, Group C, and Group D, including at least two courses from Group C and/or Group D at the 3xxx or 5xxx level or courses that have prerequisites. Credit minimums in each group, including Group A and Group B, are noted below.

English Composition (9 cr)

freshman composition (usually Comp 1011)
upper division composition (usually Comp 3011, 3012, 3013, or 3031)

Group A—Language, Logic, Mathematics, and the Study of Argument (8-10 cr)

Group B—The Physical and Biological Universe (10 cr)

Group C—The Individual and Society (12-16 cr)

Group D—Literary and Artistic Expression (8-10 cr)

Pre-Architecture Curriculum

Applicants for the B. Arch. degree program must have completed a minimum of 32 quarter credits to be considered for admission. Applicants for either of the nonprofessional degree programs (B.A. with a major in architecture or B.E.D.) must have completed a minimum of 75 quarter credits to be considered for admission.

The following courses are mandatory prerequisites for admission to all architecture degree programs. Courses that also apply toward the CALA general education requirements are noted.

Architectural History*

Arch 1021—History of Architecture (4 cr)
Arch 1022—History of Landscape Architecture (4 cr)
Arch 1023—History of Cities (4 cr)

*Transfer students may complete these courses during their first year after admission.

Composition

Comp 1011—Basic Composition (5 cr)
(Satisfies the freshman composition requirement.)

Mathematics

One calculus course (Math 1142, 1251 or 1551H)
(4-5 cr)

One additional course chosen from Geog 1501, Phil 1001, 1005, 3231, Spch 1313, Stat 1001, 3011, 3012, or 3091 (4-5 cr)

(Both courses may be used toward satisfying the Group A general education requirement.)

Physics

A physics sequence, including laboratory, chosen from the following:

Phys 1004, 1105, 1106, 1107, 1108, 1109 (15 cr)
Phys 1041, 1042 (10 cr)

Phys 1251, 1252, 1253 (12 cr)

(May be used toward satisfying the Group B general education requirement.)

Social Sciences

At least two courses chosen from Group C (8-10 cr)

Drawing

At least one course chosen from the following (4 cr):

Arch 1010—Introduction to Architectural Drawing
Arch 1041-1042-1043—Architectural Drawing
Arch 1071-1072-1073—Basic Design I, II, III
Arch 1301—Introduction to Architectural Drawing
Arch 3311—Drawing for Design
ArtS 1101—Drawing
ArtS 1401—Color
ArtS 3105—Painting

(May be used toward satisfying the Group D general education requirement.)

Major Requirements for the Bachelor of Architecture Degree Program

Levels I and II (96 cr)

Design and Communications Core (48 cr)

Arch 3081-3082-3083—Architectural Design I
(18 cr)

Arch 3091-3092-3093—Architectural Design II
(18 cr)

Arch 1010—Introduction to Architectural Drawing or Arch 1301—Introduction to Architectural Drawing or Arch 3311—Drawing for Design or ArtS 1101—Drawing or ArtS 1401—Color or ArtS 3105—Painting or Arch 1041-1042-1043—Architecture Graphics (6-8 cr)

Comp 3011 or 3012 or 3013 or 3031 (4 cr)

Technology Core (36 cr)

Arch 3060—Teknos: Force, Form, and Architecture
(4 cr)

Arch 3061-3062—Building Systems I, II (8 cr)

Arch 3064-3065—Environmental Management and Control (8 cr)

Arch 3511—Introduction to Architectural Structures (4 cr)
CE 3600-3601-3602—Structural Design for Architects (12 cr)
History, Theory, Environment Core (4 cr) Arch 5051-5067—Architectural History (4 cr)
General education electives—Group C (8 cr)
Levels III and IV (99 cr)
Design and Communication Core (42 cr) Arch 5111-5112-5113—Architectural Design III (18 cr)
Arch 5121-5122—Architectural Design IV (12 cr)
Arch 5123—Thesis (12 cr)
History, Theory, and Environment Core (16 cr) Arch 5051-5067—Architectural History (8 cr)
Arch 5137—Planning: Urban Function and Structure (4 cr)
Arch 5138—Planning: Theory and Methodology (4 cr)
Technology Electives (4 cr) Arch 5116—Structure and Form (4 cr)
Arch 5142—Historic Building Conservation (4 cr)
Arch 5957—Climate and Architecture (4 cr)
Arch 5959—Lighting Design Techniques (4 cr)
Arch 5966—Building Energy Systems (4 cr)
Practice Core (4 cr) Arch 5126—Professional Practice (4 cr)
Practice Electives (4 cr) Arch 5127—Law for Architects I (4 cr)
Arch 5128—Law for Architects II (4 cr)
Arch 5952—Programming for Architectural Design (4 cr)
Arch 5125—Real Estate Development (4 cr)
Arch 5961—Computer-Aided Architectural Design (4 cr)
Arch 5962—Computer-Aided Architectural Design (4 cr)
Arch 5963—Advanced Computer-Aided Architectural Design (4 cr)
Additional Elective Courses in Architecture or Related Disciplines (29-35 cr), including:
History, Theory, Environment, and Communications Electives (optional cr) Arch 5850—Topics in Theory (2 cr)
Arch 5851—Architecture: Theory and Philosophy (3 cr)
Arch 5852—Architecture: Thought and Design Process (3 cr)
Arch 5853—Architecture: Form and Meaning (3 cr)
Arch 5854—The Language of Architecture, Semiotics, Symbolism, and Metaphor (3 cr)
Arch 5855—Typology and Architecture (3 cr)
Arch 5951—Architecture and Behavior (3 cr)
Arch 5956—Meanings of Place (4 cr)

Landscape Architecture

Landscape architecture applies artistic and scientific principles to the research, planning, design, and management of both natural and built environments. Practitioners apply creative and technical skills and scientific, cultural, and political knowledge in the planned arrangement of natural and constructed elements on the land. Stewardship and resource conservation to make useful, safe, enjoyable, and beautiful environments are the profession's overarching goals.

Landscape architecture may, for the purposes of landscape preservation, development, and enhancement, include investigation, selection, and allocation of land and water resources for appropriate use; feasibility studies; formulation of graphic and written criteria to govern the planning and design of land construction programs; preparation, review, and analysis of master plans for land use and development; production of overall site plans, landscape grading and landscape drainage plans, irrigation plans, planting plans, and construction details; specifications; cost estimates and reports for land development; collaboration in the design of roads, bridges, and structures with respect to the functional and aesthetic requirements of the areas on which they are to be placed; negotiation and arrangement for execution of land area projects; field observation and inspection of land area construction, restoration, and maintenance.

The Department of Landscape Architecture is studying a changed structure for the degree programs. Before making application, applicants for the 1993 and 1994 academic year should contact the Department of Landscape Architecture at 612/625-6860, 125 Architecture Building or the CALA Student Affairs Office at 612/626-1000 to request information about current degree program opportunities and procedures.

Curriculum

Bachelor of Landscape Architecture

(B.L.A.) Program—This five-year program emphasizes the design process and an understanding of the various facets of nature, culture, and human behavior that affect the design, planning, and management of land. It provides basic professional training for the practice of landscape architecture leading to the professional bachelor of landscape architecture degree. The B.L.A. degree program is accredited by the Landscape Architectural Accreditation Board, an affiliate organization of the American Society of Landscape Architects.

A total of 230 credits is required for graduation. Advanced work includes sequences in design, landscape technology, communications, and history and theory. Completion of the advanced work requires a minimum of three years. All required core courses with an LA prefix plus Hort 1021 and 1022 must be completed with a minimum grade of C.

It is recommended that students complete a minimum of 800 hours of work experience outside of coursework. At least 400 of these hours should be spent in landscape construction or in a landscape nursery and 400 hours in the office of a professional landscape architect.

Bachelor of Landscape Architecture/ Master of Landscape Architecture

(B.L.A./M.L.A.) Combined Degree Program—The combined B.L.A./M.L.A. degree program is available for students with baccalaureate degrees who wish to pursue both professional and scholarly degree studies in landscape architecture. The program, jointly offered by CALA and the Graduate School, provides basic professional training for the practice of landscape architecture and an opportunity for research into a specialized area of the field.

Specific requirements for this degree are defined in the *Graduate School Bulletin*.

Bachelor of Environmental Design in Landscape Architecture (B.E.D.-L.A.)

The nonprofessional Bachelor of Environmental Design degree program allows students to explore a broad range of environmental courses as well as complete two years of professional coursework in landscape architecture. Upon completion of the B.E.D. degree requirements, students may continue on for the professional B.L.A. degree, enter a professional master's degree program, or transfer to another discipline such as urban design, city and regional planning, or an area of the social or natural sciences.

A total of 192 credits is required for the B.E.D. degree. All required core courses with an LA prefix plus Hort 1021 must be completed with a minimum grade of C. It is recommended that students also complete 400 hours of summer work in landscape architecture. Individualized study programs may be arranged with approval of the faculty.

Major Requirements for the Bachelor of Landscape Architecture Degree Program

Students must complete a minimum of 75 out of 100 credits of the prelandscape architecture requirements in categories A through E before applying for admission to the bachelor of landscape architecture degree program.

A. Language, Logic, Mathematics, and the Study of Argument

- Math 1111—College Algebra and Analytical Geometry (5 cr)
- Rhet 1101—Writing to Inform and Persuade (4 cr)
- Rhet 1104—Library Research Methods (1 cr)
- Rhet 1151—Writing in Your Major (4 cr)
- Rhet 1222—Public Speaking (4 cr)
- Rhet 3562—Writing in Your Profession (4 cr)

One of the following:

- AgEc 3300—Agricultural Management Systems (4 cr)
- College-level math (1008 or higher)
- College-level statistics
- College-level computer Programming
- IDSc 3131—Database Management Systems (4 cr)
- Phil 1001—Introduction to Logic (5 cr)
- Phil 3231—Introduction to the Philosophy of Language (4 cr)

B. The Physical and Biological Sciences—18 credits minimum

These credits are to be selected from courses in such areas as botany, biology, chemistry, geology, natural sciences, and physics. Recommended courses include Biol 1009—General Biology, Biol 1104—General Botany, Geol 1001—The Dynamic Earth or Geog 1401—Physical Geography, and EBB 3001—General Ecology. An adviser should be consulted to answer questions about coursework selection.

C. The Individual and Society—16 credits minimum

D. Literature and Artistic Expression—8 credits minimum

E. Professional and supporting courses required in the prelandscape architecture curriculum.

- Hort 1022—Herbaceous Plant Materials (5 cr)
 - LA 1022—History of Landscape Architecture (4 cr)
 - LA 1031—Introduction to Landscape Architecture (4 cr)
 - Soil 1020—The Soil Resource (4 cr)
- 12 credits in studio arts

Two courses from:

- Arch 5056—Modern Architecture (4 cr)
- Arch 5061—Contemporary Architecture (4 cr)
- LA 1021—History of Architecture (4 cr)
- LA 1023—History of Cities (4 cr)

F. Professional courses required in the bachelor of landscape architecture program.

1. Design

- LA 3081—Making Landscape Space and Place (6 cr)
- LA 3082—Ecological Informants of Landscape Architectural Design (6 cr)
- LA 3083—Landscape Architectural Design Paradigms and Methods (6 cr)
- LA 3091—The Landscape of Dwelling (6 cr)
- LA 3092—The Landscape Architectural Design of Community (6 cr)
- LA 5103—Urban Design (6 cr)
- LA 5105—Recreational and Park Planning and Design (6 cr)
- LA 5107—Regional Landscape Design and Planning (6 cr)
- LA 5110—Advanced Landscape Planning and Design (6 cr)

2. Technology

- LA 3065—Landscape Construction: Landforms Systems (4 cr)
- LA 3067—Landscape Construction: Structural Systems and Materials (4 cr)
- LA 3069—Landscape Construction: Mechanical Systems (4 cr)
- LA 5063—Landscape Construction: Spatial Performance (4 cr)
- LA 5117—Planting Design: Aesthetic and Functional Criteria (4 cr)
- LA 5119—Planting Design: Ecological Principles/ Land Use Concepts (4 cr)
- LA 5226—Professional Practice (4 cr)
- LA 5562—Introduction to Geographic Information Systems (4 cr)
- Hort 1021—Woody Plant Materials (5 cr)

3. Communication

- LA 1301—Introduction to Landscape Architecture Drawing (4 cr)
- LA 3311—Drawing for Design (4 cr)
- LA 5309—Representation in Landscape Architecture (3 cr)

4. History and Theory

- LA 5265—History of Landscape Architecture: Individual Influences (4 cr)

5. Electives supporting the degree (18-20 cr)

Major Requirements for the Bachelor of Environmental Design Degree Program

A minimum of 75 out of 100 credits of the pre-environmental design requirements in categories A through E must be completed before application for admission to the bachelor of environmental design degree program is made.

A. Language, Logic, Mathematics, and the Study of Argument

- Math 1111—College Algebra and Analytical Geometry (5 cr)
- Rhet 1101—Writing to Inform and Persuade (4 cr)
- Rhet 1104—Library Research Methods (1 cr)
- Rhet 1151—Writing in Your Major (4 cr)
- Rhet 1222—Public Speaking (4 cr)
- Rhet 3562—Writing in Your Profession (4 cr)

One of the following:

- AgEc 3300—Agricultural Management Systems (4 cr)
- IDSc 3131—Database Management Systems (4 cr)
- College-level math (1008 or higher cr)
- College-level statistics
- College-level computer programming
- Phil 1001—Introduction to Logic (5 cr)
- Phil 3231—Introduction to the Philosophy of Language (4 cr)

B. The Physical and Biological Sciences—15 credits minimum

These credits are to be selected from courses in such areas as botany, biology, chemistry, geology, natural sciences, and physics. Recommended courses include Biol 1009—General Biology, Biol 1104—General Botany, Geol 1001—The Dynamic Earth or Geog 1401—Physical Geography, and EBB 3001—General Ecology. An adviser should be consulted to answer questions about coursework selection.

C. The Individual and Society—16 credits minimum

D. Literature and Artistic Expression—12 credits minimum

E. Professional and supporting courses required in the pre-Environmental Design degree programs.

- LA 1022—History of Landscape Architecture (4 cr)
 - LA 1031—Introduction to Landscape Architecture (4 cr)
 - Soil 1020—The Soil Resource (4 cr)
- 12 credits in studio arts

Curriculum

Two courses from:

- Arch 5056—Modern Architecture (4 cr)
- Arch 5061—Contemporary Architecture (4 cr)
- LA 1021—History of Architecture (4 cr)
- LA 1023—History of Cities (4 cr)

F. Upper-level courses required in the bachelor of environmental design degree program:

1. Design

- LA 3081—Making Landscape Space and Place (6 cr)
- LA 3082—Ecological Informants of Landscape Architectural Design (6 cr)
- LA 3083—Landscape Architectural Design Paradigms and Methods (6 cr)
- LA 3091—The Landscape of Dwelling (6 cr)
- LA 3092—The Landscape Architectural Design of Community (6 cr)
- LA 5107—Regional Landscape Design and Planning (6 cr)

2. Technology

- LA 3065—Landscape Construction: Landforms Systems (4 cr)
- LA 5562—Introduction to Geographic Information Systems (4 cr)
- Hort 1021—Woody Plant Materials (5 cr)
- Ecology (8 cr)
- Planning (8 cr)

3. Communication

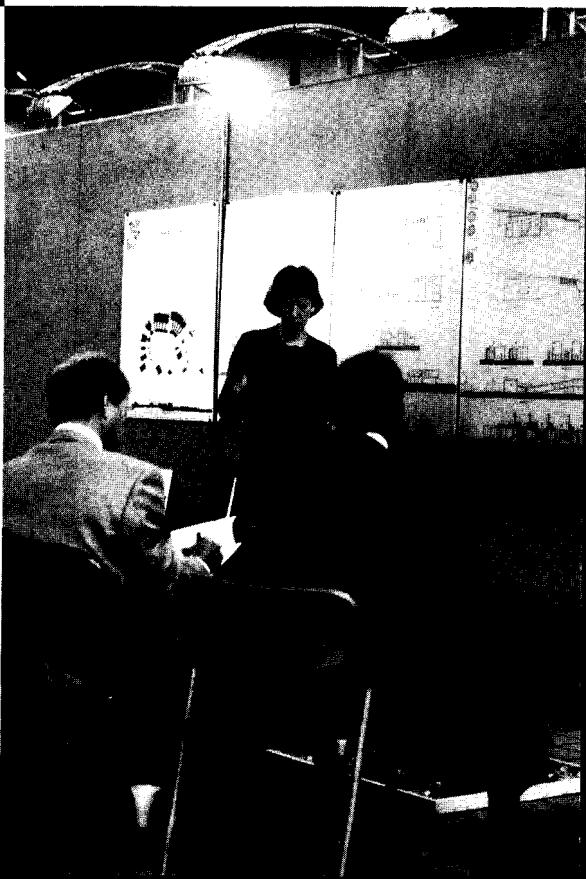
- LA 1301—Introduction to Landscape Architecture Drawing (4 cr)
- LA 3311—Drawing for Design (4 cr)
- LA 5309—Representation in Landscape Architecture (3 cr)

4. History and Theory

- LA 5265—History of Landscape Architecture: Individual Influences (4 cr)

5. Electives supporting the degree (18-20 cr)

Course Descriptions



Course Descriptions

Courses

Symbols—The following symbols are used throughout the course descriptions in lieu of footnotes:

† All courses preceding this symbol must be completed before credit will be granted for any quarter of the sequence.

§ Credit will not be granted if credit has been received for the course listed after this symbol.

¶ Concurrent registration is allowed (or required) in the course listed after this symbol.

Registration Override Permit, completed and signed by the instructor, is required for registration.

Δ Registration Override Permit, completed and signed by the unit offering the course, is required for registration.

H Honors course.

A hyphen between course numbers (e.g., 3142-3143-3144) indicates a sequence of courses that must be taken in the order listed.

A comma between course numbers (e.g., 1234, 1235, 1236) indicates a series of courses that may be entered any quarter.

In prerequisite listings, comma means “and” (e.g., “prereq 5101, 5102 or 5103” means the prerequisites are 5101 and either 5102 or 5103).

When no abbreviated department prefix precedes a course number listed as a prerequisite, that prerequisite is in the same department as the course being described.

Architecture (Arch)

1021. HISTORY OF ARCHITECTURE. (4 cr, §LA 1021; 4 lect hrs per wk)

Introduction to history and theory of architecture. Survey of architecture from ancient through modern periods.

1022. HISTORY OF LANDSCAPE ARCHITECTURE. (4 cr, §LA 1022; 4 lect hrs per wk)

Introduction to history and theory of landscape architecture. Survey of landscape architecture from ancient through modern periods.

1023. HISTORY OF CITIES. (4 cr, §LA 1023; 4 lect hrs per wk)

Introduction to history and theory of urban design. Survey of urban design from ancient through modern periods.

1301. INTRODUCTION TO ARCHITECTURAL DRAWING. (4 cr, §LA 1301)

Emphasizes visualization and drawing of form and space in the physical environment. Explores basic elements of form using design drawing systems and conventions. Develops skills in visual literacy and expression through drawing.

3060. TECHNOS: FORCE, FORM, AND ARCHITECTURE. (4 cr; prereq 1021, ¶3081, Arch major)

Introduction to fundamental conceptual frameworks that relate science, technology, and building expression to architectural form. Present day to ancient periods. Climate, force, materials, and structures case studies.

3061-3062. BUILDING SYSTEMS. (4 cr per qtr; prereq

Arch major, 3081 or ¶3081 or #; 4 lect hrs per wk)

Building systems, subsystems, and components; principles of structural theory; materials and methods used in building; new and developing technologies.

3064-3065. ENVIRONMENTAL MANAGEMENT AND CONTROL. (4 cr per qtr; prereq Arch major, 3062, 3083 or #; 4 lect hrs per wk)

Environmental-mechanical considerations including comfort technology, space habitability, climate, psychometrics, control and management systems; waste management including plumbing systems and waste disposal techniques. Electrical systems, energy, power distribution and machinery; lighting systems, physiology of seeing, light sources and control; spatial acoustics, noise barriers, absorption.

3081-3082-3083. ARCHITECTURAL DESIGN. (6 cr per qtr; prereq Arch major, Δ; 18 lab hrs per wk)

Perceptual and conceptual aspects of the physical environment. Fundamentals of architectural design and design methodology. Architectural drawing. Model making.

3091-3092-3093. ARCHITECTURAL DESIGN. (6 cr per qtr; prereq Arch major, 3083; 18 lab hrs per wk)

Architectural problems with emphasis on development of structures as an integral part of design; site planning; design process.

3311. DRAWING FOR DESIGN. (4 cr, §LA 3311; prereq Arch or BED or LA major, Arch/LA 1301 or #)

Explores drawing processes as modes of perception, cognition, and reflection. Representational aspects of drawing systems and conventions; develops understanding of space, light, and order.

3511. INTRODUCTION TO ARCHITECTURAL STRUCTURES. (4 cr; prereq Arch major, 3081, Phys 1042, 1046, 1 qtr calculus)

General theories and methods of analysis and design of architectural structures within the context of modern engineering. Fundamentals of structural behavior—bending, elasticity, tension, compression, shear, and deflection. Properties and limitations of structural elements and systems with emphasis on architectural applications.

3970. DIRECTED STUDY. (Cr ar; prereq #)

Areas of study useful to individual program objectives not available in regular course offerings.

5051. ANCIENT ARCHITECTURE. (4 cr; prereq 1021; 4 lect hrs per wk)

History of development of architecture and urban design in Egypt, Mesopotamia, Crete, Mycenae, and classical Greece and Rome until the advent of Christianity.

5052. EARLY MEDIEVAL ARCHITECTURE. (4 cr; §ArtH 5052; prereq 1021; 4 lect hrs per wk)

History of the development of architecture and urban design during early Christian, Byzantine, Islamic, Carolingian, and Romanesque periods in the Near East and Western Europe until A.D. 1150.

5053. GOTHIC ARCHITECTURE. (4 cr, §ArtH 5053; prereq 1021; 4 lect hrs per wk)

History of development of architecture and urban design in Western Europe from A.D. 1150 until 1400.

5054. RENAISSANCE ARCHITECTURE IN ITALY. (4 cr, §ArtH 5054; prereq Arch major, 1021 or #; 4 lect hrs per wk)

History of architecture and urban design in Italy, 1400-1600. Emphasis on major figures (Brunelleschi, Alberti, Bramante, Palladio) and the evolution of major cities (Rome, Florence, Venice).

5055. 18TH-CENTURY ARCHITECTURE AND THE ENLIGHTENMENT. (4 cr, §ArtH 5055; prereq 1021 or #; 4 lect hrs per wk)

Architecture, urban planning, and garden design in Europe, 1700-1850.

5056. MODERN ARCHITECTURE. (4 cr, §ArtH 5056; prereq 1021; 4 lect hrs per wk)

History of development of architecture and urban design in Europe and America from early 19th century until World War II.

5058. INDIGENOUS ARCHITECTURE. (4 cr; prereq Arch major, 1021 or #; 4 lect hrs per wk)

Case studies of indigenous environments in selected cultures.

5061. CONTEMPORARY ARCHITECTURE. (4 cr; prereq Arch major, 1021, 3083 or #; 3 lect and 1 seminar hrs per wk)

Developments, theories, and stylistic movements in architecture from World War II to the present.

5064. BAROQUE ARCHITECTURE IN ITALY.

(4 cr; prereq Arch major, 1021 or #; 4 lect hrs per wk)
Architecture and urban design in Italy, 1600-1750.

Emphasis on major figures (Bernini, Borromini, Cortona, Guarini) and the evolution of major cities (Rome, Turin).

5067. HISTORY OF ARCHITECTURAL THEORY.

(4 cr; prereq 1021 or #; 4 lect hrs per wk)
History of architectural theory from antiquity to the 20th century.

5101, 5102, 5103. TUTORIAL WORK IN HISTORY OF ARCHITECTURE. (4 cr; prereq 12 upper div cr in history or #; 1 conf and 5 research hrs per wk)

Reading and written reports on special historical problems.

5111-5112-5113. ARCHITECTURAL DESIGN. (6 cr per qtr; prereq Arch major, 3093, 3064-3065 or ¶3064-3065, CE 3600-3601-3602 or ¶CE 3600-3601-3602; 18 lab hrs per wk)

Advanced architectural problems of complex requirements, involving thorough study and detailed solution; electrical and mechanical equipment as well as structure as an integral part of design; research techniques and design process. Individual and collaborative effort.

5116. STRUCTURE AND FORM IN ARCHITECTURE. (4 cr per qtr; prereq Arch major, 3093, CE 3602; 2 lect and 3 seminar hrs per wk)

Form as an interface between programmatic requirements for environmental change and the physical means available to the architect; physical parameters of statics, mechanics of solids, and three-dimensional manipulation of material to arrive at logical solutions for given problems of enclosing space; architectural morphology studied through contemporary and ancient examples and experimental work on models; modular and proportional relationships.

5121-5122. ARCHITECTURAL DESIGN. (6 cr per qtr; prereq Arch major, 5113, CE 3602; 18 lab hrs per wk)

Advanced architectural design with emphasis on more complex architectural and urban issues and aspects of design development. Individual and collaborative effort.

5123. ARCHITECTURAL THESIS. (12 cr; prereq 5122, submission of a definitive thesis plan during qtr before thesis writing, 800 hrs of practical experience; 36 lab hrs per wk)

Individual choice, study, and solution of an architectural problem to demonstrate proficiency in all phases of design.

5126. PROFESSIONAL PRACTICE. (4 cr; prereq 3rd-yr design or ¶3rd-yr design, Arch major; two 2-hr seminars per wk, field trips)

Relations of architect to clients, contractors, and fellow practitioners; procedures of architectural practice; preparation of contract documents.

5127, 5128. LAW FOR ARCHITECTS. (4 cr per qtr; prereq 3093 or Δ; 4 lect hrs per wk)

Legal subject matter relevant to the work of architects and design professionals.

Course Descriptions

5137. PLANNING: URBAN FUNCTION AND STRUCTURE. (4 cr; prereq #)

Economic, technological, and social factors that underlie the location, distribution, and internal structure of urban settlements. Quantitative and qualitative analysis of social, economic, and physical problems or consequences of contemporary urbanization.

5138. PLANNING: THEORY AND METHODOLOGY. (4 cr; prereq 5137 or #)

Logic of a planning process as a method of decision making. Formulate goals and evaluate alternative courses of action, standards, and requirements for specific planning objectives (housing, transportation, and community facilities). Legal, administrative, and fiscal devices for plan implementation. The place of the planning function in government and the role of citizens and private groups.

5141. HISTORIC PRESERVATION PROCESS. (4 cr; prereq 1021 or #: 4 lect hrs per wk)

Philosophy and theory of historic preservation, historic origins, descriptive analysis of buildings, building documentation, technology of building conservation, historical archaeology, economic considerations, preservation law, guidelines for preservation, neighborhood conservation, international preservation, and case studies of representative preservation projects.

5142 HISTORIC BUILDING CONSERVATION.

(4 cr; prereq 5141 or #: 2 lect and 2 lab hrs per wk)
Historic building systems, materials and methods for their conservation; introduction to using contemporary systems in historic buildings.

5143. HISTORIC BUILDING RESEARCH AND DOCUMENTATION. (4 cr; prereq 5141 or #: 2 lect and 2 lab hrs per wk)

Philosophy, theory, and methods of historic building research, descriptive analysis of buildings, building documentation, historical archaeology and architectural taxonomy.

5309. REPRESENTATION IN ARCHITECTURE.

(3 cr, \$LA 5309; prereq Arch/LA 3311, Arch/LA professional degree candidate or #)
Historical and theoretical study of representation and its depiction in architecture and landscape architecture. How tools, conventions, and techniques used to visualize or reproduce architecture affect the "production" of ideas.

5850. TOPICS IN THEORY. (Cr ar; prereq Arch major, #)

Special topics in architecture examined in a philosophical and theoretical context.

5851. ARCHITECTURE: THEORY AND PHILOSOPHY. (3 cr; prereq Arch major, 3093 or #: 2 lect hrs per wk)

Architecture examined within a general philosophical context: its nature, role, purpose, meaning, definition; its mode of operation as a discipline and in relation to other fields.

5852. ARCHITECTURE: THOUGHT AND DESIGN PROCESS. (3 cr; prereq Arch major, 3093 or #: 2 lect hrs per wk)

Architecture as a thought, creative, and transformational process; underlying attitudes, paradigms, models, and strategies and tools, and their potential, limitations, implications, formal outcome, and meaning.

5853. ARCHITECTURE: FORM, ORDER, AND MEANING. (3 cr; prereq Arch major, 3093 or #)

Investigates architectural form, order, and meaning relative to architecture as aesthetic, social, environmental, and technical object. Explores current theories and concepts, their potential and implications.

5854. THE LANGUAGE OF ARCHITECTURE: SEMIOTICS, SYMBOLISM, AND METAPHOR. (3 cr; prereq Arch major, 3083 or #: 2 lect hrs per wk)

Communicative dimensions of architecture, especially as they relate to linguistic analogies. Broad historical perspective including current aspects of subject.

5855. TYPOLOGY AND ARCHITECTURE: THEORIES OF ANALYSIS AND SYNTHESIS. (3 cr; prereq Arch major, 3083 or #: 2 lect hrs per wk)

Theoretical traditions and development of the use of typology in architecture. Works of Laugier, Quatremere De Quincy, Viollet-Le-Duc, Ledoux, Durand, Camillo Sitte, and Le Corbusier. Recent developments and theoretical positions of the "neo rationalist" and "contextual" arguments for contemporary applications of typology.

5950. TOPICS IN ARCHITECTURE. (Cr ar; prereq 3093 or #)

Special topics of concern to the field of architecture.

5951. ARCHITECTURE AND BEHAVIOR. (3 cr; prereq Arch major, 3083 or #: 4 lect hrs per wk)

Relation between people and built environments; consideration of behavior research methods as they relate to architecture, theoretical basis for exchange between designers and behavioral scientists, impact of knowledge of behavior on design and design process (design/evaluation/programming cycle), behavioral findings, problems of implementation. Guest lecturers and reading of materials from related disciplines. Design and implementation of a behavioral research project.

5952. PRE-THESIS PROGRAMMING. (4 cr; prereq Arch major, 3093 or #: 3 lect hrs per wk)

Principles of programming explored through case study method. Guest lecturers discuss how principles are applied in architectural practice. Students develop program for a specific academic design problem: examination of precedents, site selection, function analysis and relationship diagrams, assumptions examination, form options, and design directives.

5956. MEANINGS OF PLACE. (4 cr; prereq upper div undergrad or grad Arch or LA major or #)

Direct experience analyzing meanings and messages of surroundings. What present-day environments reveal about the past, links between sense of place and feelings of well-being; Twin Cities central districts and selected neighborhoods as well as other settings inside and outside Minnesota.

5957. CLIMATE AND ARCHITECTURE. (4 cr; prereq Arch major, 3082, 3064 or #)

Climate as a context for architectural form and thought. Thermal comfort, synthesis and energy in architectural design in relation to temperature, humidity, wind, and solar radiation. Investigation of specific buildings/sites through graphic analysis, physical/computer simulation, and writings.

5959. LIGHTING DESIGN TECHNIQUES. (4 cr; prereq Arch major, 3083, 3065 or #; 2 lect and 2 lab hrs per wk)

Design of architectural lighting effects to enhance perception and give direction to space through practice drawing and modeling skills exercises.

5961. COMPUTER-AIDED ARCHITECTURAL DESIGN. (4 cr; prereq Arch major, 3083 or #; 2 lect and 2 lab hrs per wk)

Introduction to computing and PASCAL programming. Methods in computer-aided architectural design; hardware, software, problems, and potentials of CAAD; weekly lab projects using Terak microcomputers as a design tool.

5962. COMPUTER-AIDED ARCHITECTURAL DESIGN. (4 cr; prereq 5961 or #; 2 lect and 2 lab hrs per wk)

Applying principles and practice of computer-aided design and drafting in architecture.

5963. ADVANCED COMPUTER-AIDED ARCHITECTURAL DESIGN. (4 cr; prereq 5962 or #)

Large-scale computer-aided drafting, site modeling, facilities management, solid modeling, and design simulation. Expert systems language and application to design processes.

5966. BUILDING ENERGY SYSTEMS. (4 cr; prereq Arch major, 3064 or #; 4 lect hrs, 2 lab hrs per wk)

Conceptual understanding of the functions of building mechanical systems and their integration with other building components through case studies. Topics include residential and commercial HVAC systems, alternative energy sources, energy efficiency, spatial and structural implications of mechanical systems, indoor air quality, computer modeling, and environmental control strategies.

5970. DIRECTED STUDIES. (Cr ar; prereq #)

Areas of study useful to individual program objectives but not available in regular course offerings.

For Graduate Students Only

(For descriptions, see *Graduate School Bulletin*)

8101. SEMINAR: SUBJECTS AND METHODS IN ARCHITECTURE

8202. SPECIAL RESEARCH IN ARCHITECTURAL HISTORY

8251, 8252, 8253, 8254, 8255, 8256. ARCHITECTURAL DESIGN

8261, 8262, 8263. SELECTED PROBLEMS IN ARCHITECTURE

8777. THESIS

Landscape Architecture (LA)

1021. HISTORY OF ARCHITECTURE. (4 cr, §Arch 1021; 4 lect hrs per wk)

Introduction to history and theory of architecture. Survey of architecture from ancient through modern periods.

1022. HISTORY OF LANDSCAPE ARCHITECTURE. (4 cr, §Arch 1022; 4 lect hrs per wk)

Introduction to history and theory of landscape architecture. Survey of landscape architecture from ancient through modern periods.

1023. HISTORY OF CITIES. (4 cr, §Arch 1023; 4 lect hrs per wk)

Introduction to history and theory of urban design. Survey of urban design from ancient through modern periods.

1031. INTRODUCTION TO LANDSCAPE ARCHITECTURE. (4 cr; 4 lect hrs per wk)

Design potential of materials of the landscape; exercises in assessing land developments and detail landscapes; landscape architect's role in shaping the natural and cultural environment; brief historical review of site developments.

1301. INTRODUCTION TO LANDSCAPE ARCHITECTURE DRAWING. (4 cr, §Arch 1301)

Emphasizes visualization and drawing of form and space in the physical environment. Explores basic elements of form using design drawing systems and conventions. Develops skills in visual literacy and expression through drawing.

3065. LANDSCAPE CONSTRUCTION: LAND-FORM SYSTEMS. (4 cr; prereq 3081 or #; 2 lect and 4 lab hrs per wk)

Lectures, projects, and exercises on landform systems for landscape architecture. Topics include landform types, representation methods, manipulation techniques, use of survey data, earth work construction concerns, and design standards. Landform performance issues of storm water management, landscape integrity assurance and economic viability, with methods for evaluation.

3067. LANDSCAPE CONSTRUCTION: STRUCTURAL SYSTEMS AND MATERIALS. (4 cr; prereq 3081 or #; 2 lect and 4 lab hrs per wk)

Lectures, projects, and exercises on designing structures for landscape architecture. Topics include principles and procedures for structural design, historical applications, properties and use of materials, and design communication. Performance issues of landscape integrity assurance and economic viability, with evaluation methods.

3069. LANDSCAPE CONSTRUCTION: MECHANICAL SYSTEMS. (4 cr; prereq 3091 or #; 2 lect and 4 lab hrs per wk)

Lectures, projects, and exercises on the landscape architectural use of storm water management; urban utilities; irrigation, pool and foundation, electrical, and lighting systems. Topics include system planning and design, historical applications, and design communication. Mechanical performance issues and evaluation methods for landscape integrity and economic viability.

Course Descriptions

3081. MAKING LANDSCAPE SPACE AND PLACE. (6 cr; prereq LA student; 2 lect and 10 lab hrs per wk) Design studio. Explores landscape space perception and creation by manipulating the landscape architectural palette of landforms, plants, and structures through construction of scale models. Metaphor as an informant of design concepts.

3082. ECOLOGICAL INFORMANTS OF LANDSCAPE ARCHITECTURAL DESIGN. (6 cr; prereq LA 3081; 2 lect and 10 lab hrs per wk) Design studio. Examines ecological systems as informants of landscape architectural design and the use of aesthetic principles to reveal ecological systems at scales ranging from the garden through medium-sized sites.

3083. LANDSCAPE ARCHITECTURAL DESIGN PARADIGMS AND METHODS. (6 cr; prereq 3082; 2 lect and 10 lab hrs per wk) Design studio. Comparative analysis of the philosophical, cultural, and historical bases of diverse views of landscape architectural design. Apply design methods from each view to the creation of landscape space on medium- to large-scale sites.

3091. THE LANDSCAPE OF DWELLING. (6 cr; prereq 3083; 2 lect and 10 lab hrs per wk) Design studio. Examines the meaning of home and the behavior patterns of dwelling as they relate to the design of the residential landscape. Landscape architectural design explorations range in scale from the individual home landscape to the organization of dwellings into neighborhoods.

3092. THE LANDSCAPE ARCHITECTURAL DESIGN OF COMMUNITY. (6 cr; prereq 3091; 2 lect and 10 lab hrs per wk) Design studio. Examines public places as settings for the gathering of people. Historic precedent is used as idea source for the design of streets and outdoor public gathering spaces in the context of mixed-use development on large-scale sites.

3094. INDEPENDENT STUDY IN GRAPHICS. (1-4 cr; prereq LA student, #) Independent study of topics, of student's choice, in graphic communication. Proposal must be submitted for approval by LA faculty member.

3095. INDEPENDENT STUDY IN PLANTING DESIGN. (1-4 cr; prereq LA student, #) Independent study of topics, of student's choice, related to planting design. Proposal must be submitted for approval by LA faculty member.

3096. INDEPENDENT STUDY IN HISTORY OR THEORY. (1-4 cr; prereq LA student, #) Independent study of topics, of student's choice, related to history and/or theory of landscape architecture. Proposal must be submitted for approval by LA faculty member.

3097. INDEPENDENT STUDY IN COMPUTER-AIDED DESIGN. (1-4 cr; prereq LA student, #) Independent study of topics, of student's choice, related to use of computers to aid design and analysis. Proposal must be submitted for approval by LA faculty member.

3098. INDEPENDENT STUDY IN DESIGN. (1-4 cr; prereq LA student, #) Independent study of topics, of student's choice, related to landscape architecture or pertinent design theory or practice. Proposal must be submitted for approval by LA faculty member.

3099. INDEPENDENT STUDY IN TECHNOLOGY. (1-4 cr; prereq LA student, #) Independent study of topics, of student's choice, related to landscape architecture technology. Proposal must be submitted for approval by LA faculty member.

3200. LANDSCAPE ARCHITECTURE PRACTICUM. (1-6 cr; prereq LA student, Δ) Approved design, planning, engineering, contracting, or travel experience in applying or developing landscape architecture theory. Proposal must be submitted for approval by LA faculty; final written, graphic, and/or oral presentation must be submitted.

3311. DRAWING FOR DESIGN. (4 cr; §Arch 3311; prereq Arch or BED or LA major, Arch/LA 1301 or #) Explores drawing processes as modes of perception, cognition, and reflection. Representational aspects of drawing systems and conventions; develops understanding of space, light, and order.

5063. LANDSCAPE CONSTRUCTION: SPATIAL PERFORMANCE. (4 cr; prereq 3081 or #; 2 lect and 4 lab hrs per wk) Lectures, projects, and exercises on the use of space standards, proportions, and dimensions to achieve and evaluate spatial performance in landscape architecture. Topics include the spatial accommodation of people and automobiles in the basic array of landscape applications. Introduction to land use controls and development standards.

5103. URBAN DESIGN. (6 cr; prereq 3092; 2 lect and 10 lab hrs per wk) Design studio. Landscape architectural design investigations of the creation of urban form and space as a function of the relationship between the physical structure of landscape and the historical, political, economic, and philosophical ideologies of urban place.

5105. RECREATION AND PARK PLANNING AND DESIGN. (6 cr; prereq 3092; 2 lect and 10 lab hrs per wk) Design studio. Explores the meaning of park, landscape architectural conventions of park design, departures from park design conventions, patterns of recreation behavior, and processes of participatory design as informants of the design of settings for outdoor recreation.

5107. REGIONAL LANDSCAPE DESIGN AND PLANNING. (6 cr; prereq 3092, 5562; 2 lect and 10 lab hrs per wk)

Design studio. Applying geographic information systems to analyses, plans, and policies for regional landscapes based on concepts of landscape ecology, landscape perception, settlement patterns, and policy planning.

5109. SPECIAL PROBLEMS: THESIS PROPOSAL. (2 cr; hrs ar)

Individual research resulting in a proposal for thesis project to be developed in LA 5110.

5110. ADVANCED LANDSCAPE PLANNING AND DESIGN. (6 cr; prereq terminal qtr of study; 2 lect and 12 lab hrs per wk)

Advanced studies in area of student's option.

5117. PLANTING DESIGN: AESTHETIC AND FUNCTIONAL CRITERIA. (4 cr; prereq 3083, Hort 1021 or #)

Lectures, presentations, field trips, readings, and projects exploring aesthetic and functional design principles related to the use of plants in the landscape. Explores both historic and modern principles through design projects of various scales.

5119. PLANTING DESIGN: ECOLOGICAL PRINCIPLES/LAND USE CONCEPTS AND IMPLEMENTATION OF PLANTING DESIGN.

(4 cr; prereq 3083 or #)

Lectures, presentations, field trips, readings, and projects related to principles and practices of using plant materials in an ecologically sound and environmentally sensitive manner. Principles derived from prairie, northwoods, riverine, and wetland environments.

Integration of naturalized materials in environments of various scales. Investigation of planting implementation skills.

5131. DIRECTED STUDIES IN LANDSCAPE ARCHITECTURE HISTORY AND THEORY. (1-6 cr; prereq 3rd-yr LA student, Δ)

Advanced independent studies. Student expected to have successfully completed 3xxx-level independent study courses in previous quarters.

5132. DIRECTED STUDIES IN LANDSCAPE ARCHITECTURE DESIGN. (1-6 cr; prereq 3rd-yr LA student, Δ)

Advanced independent studies. Student expected to have successfully completed 3xxx-level independent study courses in previous quarters.

5133. DIRECTED STUDIES IN LANDSCAPE ARCHITECTURE TECHNOLOGY. (1-6 cr; prereq 3rd-yr LA student, Δ)

Advanced independent studies. Student expected to have successfully completed 3xxx-level independent study courses in previous quarters.

5134. DIRECTED STUDIES IN EMERGING AREAS OF LANDSCAPE ARCHITECTURE. (1-6 cr; prereq 3rd-yr LA student, Δ)

Advanced independent studies in areas of student's choice that relate to new or renewed direction in landscape architecture. Student expected to have successfully completed 3xxx-level independent study courses in previous quarters.

5136. GOVERNMENT RECREATION FACILITIES PLANNING. (4 cr; prereq 3rd-yr LA student or #)

Explores design policies concerning development of specific recreational facilities at federal water resource projects. Lectures, discussions, and field trips on analyzing criteria for organization of federal recreational environments.

5140. INTERDISCIPLINARY STUDIES IN LANDSCAPE ARCHITECTURE. (Cr ar [2-6 cr per qtr up to 18 cr]; prereq #)

Interdisciplinary research, planning, and/or design project related to landscape architecture; subject matter selected by students, faculty, or real users requesting assistance. Topics may include natural resource conservation, downtown revitalization, recreational facilities and programming, energy-efficient design, historic preservation, agricultural land use, land reclamation, environments for the aged, computerized land use planning, visual assessment, housing, new towns.

5226. PROFESSIONAL PRACTICE. (4 cr; prereq terminal yr of study)

Professional ethics, responsibility, and relations in business. Office management, preparation of professional communications, estimates, specifications, and contracts. Lectures, written exercises, and office visits.

5228. SEMINAR: TOPICS IN CAMPUS PLANNING. (4 cr; prereq 3093 or #)

Lectures, discussion, presentations, field trips, readings, and paper on various aspects of contemporary and historic issues in campus planning, use of energy-efficient buildings, and efficient land use and site planning.

5265. HISTORY OF LANDSCAPE ARCHITECTURE: INDIVIDUAL INFLUENCES. (4 cr; prereq 3rd-yr LA student)

How personal influences on noteworthy designers (current and historic) precipitated design structures within affective domain of expression. Structural design ideas first espoused by these designers that are basic to vocabulary of contemporary design.

5309. REPRESENTATION IN LANDSCAPE ARCHITECTURE. (3 cr, §Arch 5309; prereq Arch/LA 3311, Arch/LA professional candidate or #)

Historical and theoretical study of representation and its depiction in architecture and landscape architecture. How tools, conventions, and techniques used to visualize or reproduce architecture affect the "production" of ideas.

Course Descriptions

5562. INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS. (4 cr. §Geog 5562; 4 lect hrs per wk)

Basic concepts of geographic information systems structure. Theory and applications for landscape location, resource analysis, and regional planning. Location principles, data structure, and variable attributes.

For Graduate Students Only

(For descriptions, see *Graduate School Bulletin*)

8110. GRADUATE LANDSCAPE PLANNING AND DESIGN

8111. DIRECTED STUDIO IN LANDSCAPE ARCHITECTURE

8281. RESEARCH ISSUES IN LANDSCAPE ARCHITECTURE

8282. RESEARCH ANALYSIS METHODS IN LANDSCAPE ARCHITECTURE

8283. RESEARCH PROPOSALS IN LANDSCAPE ARCHITECTURE

8284. LANDSCAPE ARCHITECTURE COLLOQUIUM

8310. DESIGNED LANDSCAPE SPACE TYPOLOGIES

8320. PERCEPTION MANIPULATION IN EXTERIOR SPACE

8330. CONCEPTS OF LANDSCAPE EVALUATION

8350. SMALL COMMUNITY PLANNING AND THE CONSERVATION OF NATURAL RESOURCES

8370. THE SUBLIME, THE BEAUTIFUL, AND THE PICTURESQUE: THEORY AND PRACTICE

8390. DESIGN IN LANDSCAPE ECOLOGY

8500. LANDSCAPE ARCHITECTURE RESEARCH PROJECT

8600. LANDSCAPE ARCHITECTURE EDUCATION

College of Architecture and Landscape Architecture

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Administration and Faculty

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In the following faculty listing, R.A. designates licensure as a registered architect; R.L.A. designates licensure as a registered landscape architect; A.I.A. designates member, American Institute of Architects (a member of the A.I.A. must be a registered architect); F.A.I.A. designates fellow, American Institute of Architects, and F.A.S.L.A. designates fellow, American Society of Landscape Architects; A.I.C.P. designates member by examination of the American Institute of Certified Planners; and P.E. designates licensure as a professional engineer.

Architecture

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*head**

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Lecturers

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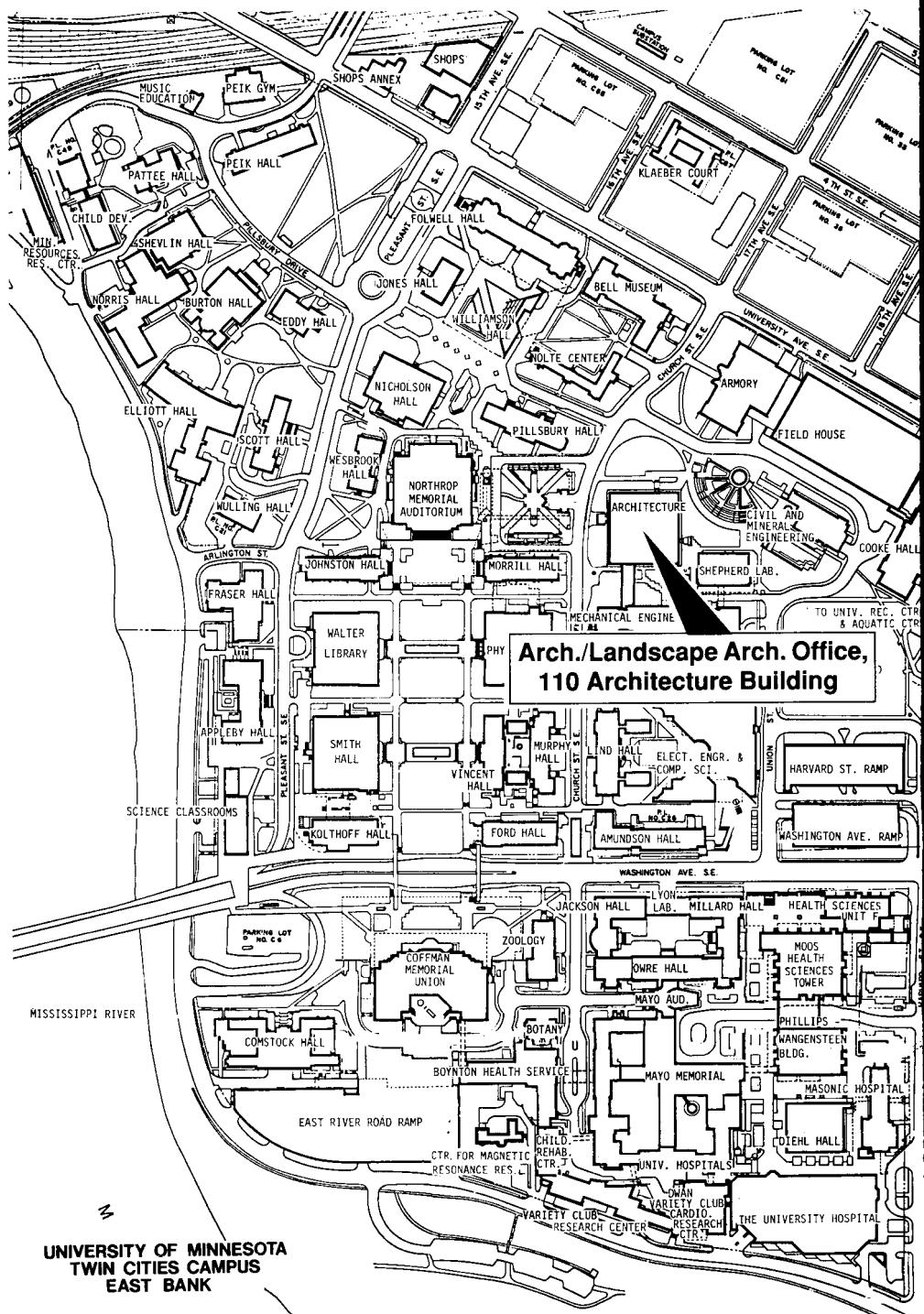
Teaching Specialist

Craig Churchward, B.L.A. (R.L.A.)

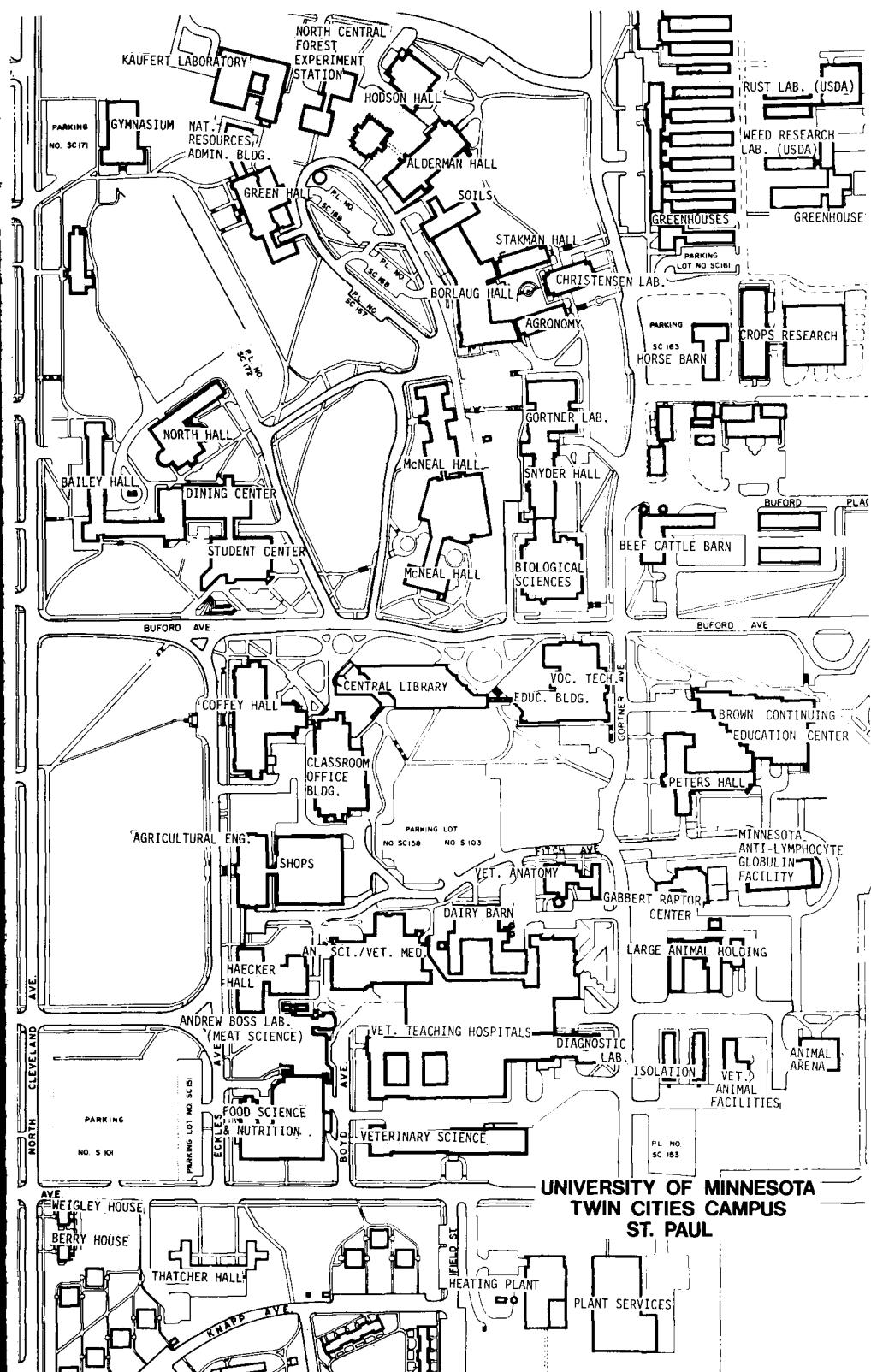
Adjunct Research Associate

David W. Lime, Ph.D.

*Recipient of the Horace T. Morse-Minnesota Alumni Association Award for Outstanding Contributions to Undergraduate Education.



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Index

- Academic Policies 20-26
Academic Progress 23-24
Academic Units 8, 28, 31
Administration and Faculty 7-8, 44-45
Admissions 10-15
Advanced Placement 21
Advanced Standing 13, 15
Advisers 18
AIAS 17
Application Procedures 12-15
Auditing 20, 23
Bachelor of Architecture 28-31
Bachelor of Arts in Architecture 29, 30
Bachelor of Environmental Design 29-30, 33-34
Bachelor of Landscape Architecture 32-33
B.L.A./M.L.A. Combined Program 32
Cancellation 20-21
Career Planning and Placement 18
Centers 3, 8
Class Attendance 22
Class Schedule 2
CLEP 21
College Assembly 8
College Office 2, 3
Conduct and Discipline 25
Continuation Courses 23
Continuing Education 17
Credits by Special Examination 20
Credits and Class Attendance 21-22
Credits in Graduate School 22
Course Descriptions 36-42
Course Load 21-22
Course Requirements 29-31, 32
Curriculum Requirements 28-31, 32-34
Dean's List 24
Dean's Office 7, 8
Degree Changes 9, 12, 14, 31
Degrees Offered 9, 28-29, 32
Department Offices 3
Directory 3
English Proficiency 12
Equal Opportunity 2
Extra Credit 20
Extracurricular Events 3
Facilities and Resources 8-9
Faculty 44-45
Financial Aid 15
Freshman Admission 10
General Education Requirements 28, 30, 32-34
General Information 6-18
Grading 22-23
Graduate Degree Applicants 13, 15
Graduate Teaching Assistants 16
Graduation Requirements 25-26
Grievances 25
History of CALA 6
Immunization 3
Incompletes 23
Independent Study 20
MASLAS 17
Master of Architecture 29
Mission of the College 7
Nonprofessional Degrees 9, 12-13, 14-15, 29, 32, 33-34
Petition Procedures 21
Policies 2-3
Professional Registration 10
Program Adviser 2
Publications 16-17
Reapplication 13, 15
Records, Access to 2
Registration 20-21
Repeating Courses 21
Residency Requirements 22
Resources 2
Scholarships 15-16
Scholastic Difficulty 23-24
Services for Students with Disabilities 18
Special Programs 9
Student Activities 17
Student Affairs Office 17-18
Student Organizations 17
Student Services 17-18
Study Abroad 9
Suspension 24
Symbols for Courses 36
Transfer Students (see Advanced Standing) 10-12, 13
Undergraduate and Pregraduate Applicants 12-13, 14
Visiting Lecturers and Critics 17
Withdrawals 20-21, 23

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