



PROPOSAL TO THE SENATE COMMITTEE ON EDUCATIONAL POLICY

TITLE OF THE PROPOSAL:

Establish a graduate Concentration in Structures within the existing Master of Science in Architectural Studies (MS in AS) degree program.

SPONSOR:

Abbas Aminmansour, School of Architecture (333-2834, AAmin@Illinois.edu)

COLLEGE CONTACT:

Professor Alan Mette, Associate Dean, College of Fine and Applied Arts (333-6061, AMette@illinois.edu)

BRIEF DESCRIPTION:

In 1890, the University of Illinois offered the nation's first baccalaureate degree program in Architectural Engineering. This program later developed into an MS degree in Architectural Engineering.

Over time, the Architectural Engineering program changed to the "Professional Option in Architectural Structures," which is a graduate specialization under our M.Arch degree program and the MS degree in Architectural Engineering was discontinued. The new area of specialization in Structures has never been formally recognized on students' credentials. This proposal recommends establishing a graduate Concentration in Structures within the existing MS in AS degree program.

JUSTIFICATION:

Graduates of our Structures program have the education to become either or both -- licensed architects with extensive knowledge of structures or licensed structural engineers with extensive knowledge of architecture. Having these very unique skills is a considerable asset in today's integrated design and construction industry. Graduates of our Structures program often become leaders in their fields due to their depth and breadth of combined knowledge of architectural and structural design of buildings. Further, employers of our Structures graduates often comment that our students are more productive early in their careers than many others.

Illinois continues its long and proud tradition of offering an education that addresses the ever-present need for individuals who can bring architectural values and creative problem-solving skills to bear on the engineering of complex building structures. Graduates of our Structures program have played key roles in design of such significant buildings as Sears (Willis) Tower; John Hancock Tower; Jin Mao Tower; Guggenheim Museum in Bilbao; Lotte Tower; Trump Tower and Burj Khalifa (Dubai) to name a few.

Proposal to Establish A Graduate Concentration in Structures

A number of major firms, mostly based in Chicago, have hired our Structures graduates in the past and are very pleased with their qualifications. However, firms who have not had any prior experience with our very capable Structures graduates are at times reluctant to hire them due to the lack of formal acknowledgment of their credentials (such as a concentration in Structures), thus limiting their career opportunities.

In addition, over the last few decades, the State of Illinois has permitted our Structures graduates to take its rigorous Structural Engineer (SE) licensing exam although they do not hold a degree accredited by the Accreditation Board for Engineering and Technology (ABET). This is a great recognition of the quality of our graduate Structures program. Due to the global nature of today's design practice, an increasing number of our graduates seek licensure as Structural Engineers (SE) or Professional Engineers (PE) in other states through reciprocity. However, other States often do not approve applications from our Structures graduates for licensure as SE or PE in their States due to the lack of formal acknowledgment of their credentials in structural design.

This proposal requests establishing a graduate Concentration in Structures under our existing MS in AS degree program. Official recognition of Structures as a Concentration on our students' transcripts will identify our graduates as having developed extensive knowledge in structural design of buildings and offer them more career and licensure opportunities as structural designers. Further, offering a Concentration in Structures will attract more quality domestic and international students to our program.

In order to participate in the graduate Structures Concentration, students must meet the following requirements:

1. Be admitted to the School of Architecture's MS in AS degree program.
2. Register their intent to participate in the Structures Concentration with the School's Graduate Office prior to completing their first semester in their degree program.
3. Complete 27 credit hours of graduate level architectural structures courses as follows:
 - Arch-550: Reinforced Concrete Design (4 hours)
 - Arch-551: Structural Analysis (4 hours)
 - Arch-552: Soil Mechanics and Foundations (3 hours)
 - Arch-553: Advanced Reinforced Concrete Design (3 hours)
 - Arch-554: Advanced Steel Design (3 hours)
 - Arch-556: Advanced Structural Planning (4 hours)
 - Arch-560: Advanced Structural Analysis (3 hours)
 - Arch-595EQ: Seismic Design (3 hours)

It is noted that the existing MS in AS degree requires 32 graduate hours including 16 hours of Architecture courses and 16 hours of electives. A sample course plan for the Structures Concentration within the MS in AS degree program is included in Appendix I of this proposal.

BUDGETARY AND STAFF IMPLICATIONS:

This proposal only requests recording of Structures as a Concentration under the existing MS in AS degree on students' transcript for those participating in our current Structures specialization. This program has existed for decades. There are no recommendations for any curricular or course changes to the existing Structures specialization. Further, the Structures program will remain at its traditional level of accepting about 20 new

Proposal to Establish A Graduate Concentration in Structures

graduate students per academic year. Therefore, no budgetary implications are expected as the result of this proposal.

Proposal to Establish A Graduate Concentration in Structures

CLEARANCE SIGNATURES:

Pat Mott 1-28-15
School of Architecture Date

Alan T. Motta 2-13-15
College of Fine and Applied Arts Date

Carla A. Finnegan 4-14-15
Graduate College Date

Office of the Provost Date

Senate Educational Policy Committee Date

STATEMENT FOR PROGRAMS OF STUDY CATALOG:

GRADUATE CONCENTRATION IN STRUCTURES:

The School of Architecture offers a Structures Concentration under its MS in AS degree program. Completion of this in-depth plan of study will result in recording of Structures as a Concentration on the student's transcript under the MS in AS degree. Students interested in participating in the Structures Concentration must be admitted to the School of Architecture's MS in AS degree program; register their intent to enter the Structures Concentration with the School's Graduate Office prior to completing their first semester in their degree program and complete 27 graduate credit hours of architectural structures courses from the required courses list below. Pre-requisite subjects for the Structures Concentration include the following: calculus I and II; statics and dynamics; mechanics of materials; one course in structural steel design and one course in reinforced concrete design. Students without these pre-requisites may enter the Structures Concentration upon completion of their pre-requisite courses.

Required Course Title		Credit Hours
Arch 550	Reinforced Concrete Design	4
Arch 551	Structural Analysis	4
Arch 552	Soil Mechanics and Foundations	3
Arch 553	Advanced Reinforced Concrete Design	3
Arch 554	Advanced Steel Design	3
Arch 556	Advanced Structural Planning	4
Arch 560	Advanced Structural Analysis	3
Arch 595EQ	Seismic Design	3
Total Required Credit Hours		27

Architecture

Graduate Degree Programs

The School of Architecture offers two graduate programs, leading to a Masters degree: 1) a two-year professional Master of Architecture degree and 2) a one-year Master of Science in Architectural Studies.

The Master of Architecture (M.Arch) program is for students holding a four-year Bachelor of Science in Architectural Studies (or similar degree in architecture). Completion of the M.Arch degree program requires 62 credit hours. One may be admitted to the Master of Architecture program with Limited Standing if the student holds a bachelor's degree (or higher) in any field other than architecture. M.Arch students with Limited Standing typically take two years to complete undergraduate prerequisite courses to attain full standing in the M. Arch program. The Master of Architecture degree is a professional degree accredited by the National Architectural Accreditation Board (NAAB).

The Master of Science in Architectural Studies (MS in AS) degree program is for students holding a five-year Bachelor of Architecture professional degree or for students interested in pursuing one of the graduate specializations offered through the School of Architecture. Completion of the MS in AS degree program requires 32 credit hours. The MS in AS degree is not accredited by NAAB. The School offers a Structures Concentration under the MS in AS degree program.

The School of Architecture, together with the graduate programs of Business Administration, Computer Science, Urban and Regional Planning, and Civil and Environmental Engineering, offers graduate programs leading to the following joint degrees: Master of Architecture and Master of Business Administration, Master of Architecture and Master of Computer Science, Master of Architecture and Master of Urban Planning, and Master of Architecture and Master of Science in Civil and Environmental Engineering (Construction Engineering and Management) (Structures).

Proposal to Establish A Graduate Concentration in Structures

The School of Architecture, together with the Department of Landscape Architecture, offers a graduate program leading to the Doctor of Philosophy degree.

Master of Science, Architectural Studies (Post-professional Degree)

Required Courses	Thesis Option- Required Hours	Non-thesis Option-Required Hours
Architectural Electives from dept. list	16	16
Electives	16	16
Thesis Hours Required--ARCH 599 (min/max applied toward degree):	0 min	
Total Hours	32	32
Minimum 500-level Hours Required Overall:	12	12
Other Requirements:		
Candidates must spend at least two semesters and earn at least half of the required graduate hours in residence.		
Minimum GPA:	2.75	2.75

EFFECTIVE DATE:

It is requested that this proposal be implemented as early as possible upon approval and encompass students already in the Structures specialization at that time.

April 22, 2015 version

APPENDIX I

**Sample Course Plan for the Structures Concentration
within the MS in AS degree Program¹**

FIRST SEMESTER		SECOND SEMESTER	
ARCH-550: Reinforced Concrete Design	4	ARCH-552: Soil Mech & Foundations	3
ARCH-551: Structural Analysis	4	ARCH-556: Advanced Structural Planning	4
ARCH-554: Advanced Steel Design	3	ARCH-553: Adv Reinforced Concrete Design	3
ARCH-595EQ: Seismic Design of Buildings	3	ARCH-560: Advanced Structural Analysis	3
Elective ²	2	Elective ²	3
Total Hours	16	Total Hours	16
Total Overall Credits: 32 hours			

1 Students must obtain approval from their advisor before registering for each semester

2 Recommended electives:

Arch-558: Structural Wood Design

Arch-559: Structural Masonry

Arch-555: Prestressed Concrete Design

Arch-595IN: Integrated Design and Construction of Buildings

Illinois School of Architecture

Regular Faculty Meeting of Tuesday, September 30, 2014

Agenda Item 4b

**Proposal to Establish a Structures Concentration
within the Existing MS in Architectural Studies Degree**

Action

Adopt the attached proposal.

Background

From Associate Professor Abbas Aminmansour, regarding agenda items 4b and 4c: "These proposals were approved by the Performance Program faculty and submitted to the Curriculum Committee last year. The Curriculum Committee Chair, Professor John Stallmeyer (copied on this message) sent us a number of recommended changes on behalf of his Committee for improving the proposals. Those changes are reflected in the attached versions. Professor Stallmeyer further stated at that time that these proposals were ready for submission to the Executive Committee for inclusion in the agenda of an upcoming faculty meeting for consideration."

Name of existing Illinois (UIUC) degree: _____

Name of non-Illinois partnering institution: _____

Location of non-Illinois partnering institution:

State of Illinois US State: _____ Foreign country: _____

- B. Proposal to create a new academic unit (college, school, department, program or other academic unit):

Name of proposed new unit: _____

- C. Proposal to rename an existing academic unit (college, school, department, or other academic unit):

Current name of unit: _____

Proposed new name of unit: _____

- D. Proposal to reorganize existing units (colleges, schools, departments, or program):

1. Proposal to change the status of an existing and approved unit (e.g. change from a program to department)

Name of current unit including status: _____

2. Proposal to transfer an existing unit:

Current unit's name and home: _____

Proposed new home for the unit: _____

3. Proposal to merge two or more existing units (e.g., merge department A with department B):

Name and college of unit one to be merged: _____

Name and college of unit two to be merged: _____

Proposed name and college of new (merged) unit: _____

4. Proposal to terminate an existing unit:

Current unit's name and status: _____

- E. Other educational policy proposals (e.g., academic calendar, grading policies, etc.)

Nature of the proposal: _____

Revised 10/2012

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

EP.15.80

Office of the Provost and Vice Chancellor
for Academic Affairs

Swanlund Administration Building
601 East John Street
Champaign, IL 61820



Gay Miller, Chair
Senate Committee on Educational Policy
Office of the Senate
228 English Building, MC-461

Dear Professor Miller:

Enclosed is a copy of a proposal from the College of Fine and Applied Arts, School of Architecture, and the Graduate College to establish a Concentration in Structures within the MS in AS degree.

Sincerely,

A handwritten signature in black ink that reads 'Kathryn A. Martensen'.

Kathryn A. Martensen
Assistant Provost for Educational Programs

Enclosures

Cc: A. Mette
A. Aminmansour
A. McKinney
C. Finnegan
W. Wimmer
K. Kuntz

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Graduate College

204 Coble Hall
801 South Wright Street
Champaign, IL 61820-6210



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APR 15 2015
OFFICE OF THE PROVOST

Executive Committee

April 14, 2015

2014-2015 Members

Kathy Martensen
Office of the Provost
207 Swanlund MC-304

Sarah Lubinski, Interim
Dean & Chair
Graduate College

Dear Kathy,

Members

Enclosed please find the proposal to establish a graduate concentration in Structures within the existing Master of Science in Architectural Studies (MS in AS) degree program.

Abbas Aminmansour
Architecture

The proposal was received by the Graduate College on February 25, 2015. It was reviewed by the Program Subcommittee on March 31, 2015. The proposal was approved to move forward to the Executive Committee pending one revision:

Dilip Chhajed
Business Administration

- While the course requirements are listed in item #3 of the Justification section of the proposal, the Program Subcommittee feels that a table with this information should be included in the Statement for the Programs of Study.

Wojciech Chodzko-Zajko
Kinesiology & Community
Health

Susan Cole
Social Work

The revised proposal was received on April 7, 2015. The proposal was forwarded to the Executive Committee. It was approved by the Executive Committee at the April 14, 2015 meeting.

John D'Angelo
Mathematics

I send the proposal to you now for further review.

Nicki Engeseth
Food Science & Human
Nutrition

Sincerely,

A handwritten signature in blue ink that reads "Cara A. Finnegan".

Susan Fowler
Special Education

Cara A. Finnegan
Interim Associate Dean
Graduate College

Marie Heffernan
Psychology

Paul Hergenrother
Chemistry

Jack Juvik
Crop Sciences

Samantha Knoll
Mechanical Science &
Engineering

John Lambros
Aerospace Engineering

Glauco Paulino
Civil & Environmental
Engineering

Dana Rabin
History

Carla Santos
Recreation, Sport and
Tourism

Renee Trilling
English

c: A. Aminmansour
A. McKinney
A. Mette

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School of Architecture
Office of the Director
117 Temple Hoyne Buell Hall, MC-621
611 Taft Drive
Champaign, IL 61820-6921 USA



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FEB 25 2015
GRADUATE COLLEGE

October 20, 2014

Professor Alan Mette
Interim Associate Dean for Undergraduate Academic Affairs
College of Fine + Applied Arts
110 Architecture Building
M/C 622

Dear Associate Dean Mette,

At its September 30 meeting, the faculty of the School of Architecture approved a "Proposal to Establish a Structures Concentration within the Existing MS in Architectural Studies Degree," submitted for consideration by Associate Professor Abbas Aminmansour. Minutes of the meeting reflect that the vote approving the proposal was 19 in favor and 2 opposed, with no abstentions.

Professor Aminmansour reports that the proposal was approved by the Performance Program Area faculty during the 2013-2014 academic year. He reports, too, that the proposal was submitted to the school's Curriculum Committee, and that the committee's chair recommended revisions that were subsequently incorporated into the proposal that Professor Aminmansour put before the faculty on September 30. (See the email message from Professor Aminmansour to me, attached, for additional details.) Please note that the School's *Bylaws* (at VI.E) provide that "Items may be placed on the agenda by the Director, by the Executive Committee, or by any member of the faculty."

As context, I will note that the school's 2014-2015 Curriculum Committee has been charged with transforming the comprehensive framework for new BS Architectural Studies and Master of Architecture curricula into Senate-formatted proposals that will be submitted to the college Curriculum Committee later this academic year.

I should also note the following language from a hiring proposal submitted to the school's Executive Committee by Professor Aminmansour and another structures colleague on behalf of the Performance Program Area faculty:

Our Structures program and its two new proposals that the School recently passed is positioned to offer future professionals the education and skills for a successful and productive career in architectural and/or structural design of buildings. To accomplish this goal and to attract a new cohort of students, we need to fill one more vacant Structures faculty position in order to be able to offer a high quality and innovative degree program in building structural design.

Associate Dean Alan Mette

October 20, 2014

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Many thanks for assisting the college Curriculum Committee's review of the attached proposal. I would be happy to meet with you and members of the committee should you have any questions about the proposal.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Mortensen". The signature is fluid and cursive, with the first name "Peter" being more prominent than the last name "Mortensen".

Peter Mortensen
Director

Attachment