

BOARD OF HIGHER EDUCATION
REQUEST FOR BOARD ACTION

NO.: AAC 08-02

BOARD DATE: October 19, 2007

MOVED: The Board of Higher Education hereby approves the application of **Massachusetts College of Art and Design** to award the **Master of Architecture**.

Upon graduating the first class for this program, Massachusetts College of Art and Design shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty resources and program effectiveness.

Authority: Massachusetts General Laws, Chapter 15A, Section 9(b)

Contact: Aundrea Kelley, Associate Vice Chancellor for Academic Policy

MASSACHUSETTS BOARD OF HIGHER EDUCATION

Massachusetts College of Art and Design

Master of Architecture

INTENT AND MISSION

In September 2007 Massachusetts College of Art and Design (MassArt) submitted an expedited proposal to offer the Master of Architecture (M. Arch).

The MassArt mission states that “the college’s professional baccalaureate and graduate programs prepare students to participate in the creative economy as fine artists, designers, and art educators, and to engage in the well being of their society.” The proposed Master of Architecture Program is designed to embrace these goals in a concrete fashion by training architects who acquire the necessary design and engineering skills, while also understanding the environmental and social impact of their actions.

For more than a decade, Massachusetts College of Art and Design explored the feasibility of creating a Master of Architecture (M. Arch) Program to complement its undergraduate architecture program. The proposed program is intended to provide rigorous, accessible and affordable professional preparation for a variety of architecture-centered careers in a world facing serious global challenges.

The College Board of Trustees approved the Master of Architecture proposal on April 10, 2007, and the Letter of Intent was circulated April 17, 2007. No comments in response were received.

NEED AND DEMAND

According to the US Department of Labor (*Bureau of Labor Statistics – Occupational Outlook Handbook, Architecture* - www.bis.gov/oco/ocos038.htm) one in four architects were self-employed, which is three times the proportion for all professional and related occupations. The job outlook for employment of architects is expected to grow about as fast as the average for all occupations through 2014, and internship opportunities for new architecture students are expected to increase over the next decade. Though architecture graduates may face competition in the most prestigious firms, opportunities would be best for those with experience in the field while still in school, as well as those with knowledge of CAD drafting and modeling technology. Consistent with the AIA (*American Institute of Architects 2006-2007 Strategic Plan*), the goal is to broaden the job description of Architects to include construction management, interiors, and other areas performed by both designers in related fields and in the construction industry. The proposed program is consistent with these goals in that it both widens the skill base of graduates: They will be architectural designers with first-hand construction knowledge, with a strong base in construction, building technology, structures, skilled in current CAD technologies in 2D and 3D design and drawing, and have an advantage in that they will possess a wide range of job-related skills upon graduation.

In the Boston region, the last decade has witnessed an increase in architectural firms. The “Innovation Economy” trend has resulted in a shift from domination in the architectural sector by large companies to smaller enterprises. Eighteen percent of MassArt’s graduates have started and maintain their own companies within the Commonwealth.

The College provided data on approximately 120 alumni who responded to a fall 2005 survey. Of that group:

- (92) or 77% work for or have worked for architectural firms (might be included below).
- (21) or 18% are self-employed.
- (11) or 9% have their own design/build or construction companies.
- (5) or 4% are teaching at academic institutions (Technion, MIT, MassArt and overseas).
- (9) or 8% are in related industries (furniture design, exhibit design, IT, engineering, landscape design, and writing/journalism)

Data from 45 out of 48 current students surveyed in fall 2005, showed that 87% are considering obtaining a Master of Architecture degree, 95% would support a Master of Architecture program at MassArt, 69% would consider enrolling, and 89% believed that interacting with graduate students in the program would strengthen it. They were also surveyed on what they would change in the program in an open-ended question: 16 (35%) thought that more architectural history classes were needed, 8 (17%) wanted more content in sustainability, 9 (20%) sought more computer-based classes in modeling and drawing, 19 (45%) sought more construction classes, several students wanted more studio time with faculty, and several noted that having a larger student body would be a positive development for the department.

Existing Programs. The size and enrollment trends for Massachusetts public and private institutions that offer similar programs are as follows:

- The Graduate School of Art and Design at Harvard University currently enrolls 330 graduate students in architecture and recently has maintained stable enrollment trends.
- The School of Architecture at the Massachusetts Institute of Technology recently has witnessed fluctuations in the enrollments for its different graduate architecture programs with no discernible trends. At present, the program enrolls 99 students.
- Boston Architectural College currently enrolls 364 students in its M. Arch program and has witnessed a sustained growth wherein their graduate program, which formerly account for 10% of their total enrollment, now accounts for 45%.
- Northeastern University’s new graduate architecture program recently has doubled in size each year. The University anticipates 40-45 students entering this fall, up from last year’s incoming class of 23.
- The graduate architecture program at the University of Massachusetts at Amherst recently has witnessed both a stable and upwards trend in enrollment. In the fall of 2007, 15 incoming students will be admitted, generating a total program enrollment of 40 students. It is expected that this new program (which has just recently become fully accredited) will attain a full enrollment of 75 students in the next two years.

A distinguishing aspect of the proposed MassArt program is the design-build option, an increasingly popular alternative for architects seeking to work outside the major architecture firms in design-build firms or construction companies in particular. Within the architecture field, the “fabrication option” that the proposed program will feature is becoming an increasingly popular alternative.

ADMISSION AND ENROLLMENT

The College anticipates that architecture students admitted with an undergraduate degree from MassArt will complete the program requirements in four semesters. These semesters occur consecutively over a summer, fall, spring, summer semester sequence. Students from other architectural programs will be evaluated in comparison to program requirements and be required to complete missing prerequisites. Students with a bachelor's degree, who were not architecture majors, may be required to enroll in up to three additional semesters to complete program prerequisites. Admissions requirements include:

- Portfolio of work to date, showing school projects and examples of any professional work
- Transcripts from degree-awarding college(s)
- Personal Statement
- Resume
- GRE
- Three letters of reference, only for students who graduated more than five years before submitting an application
- TOEFL results for students whose primary language is not English

The College projects Master of Architecture enrollments as follows:

Program Enrollment Projection

	# of Students Year 1	# of Students Year 2	# of Students Year 3	# of Students Year 4*
New Full Time	10	15	15	15
Continuing Full Time	0	10	15	15
New Part Time	0	0	3	5
Continuing Part Time	0	0	0	3
Totals	10	25	33	38

CURRICULUM (Attachment A)

The curriculum combines professional requirements with hands-on design-build experience focused on community living and working spaces, so that students develop into socially aware artisan-architects who are versatile problem-solvers and skilled collaborators, dedicated to a sustainable improvement of the built environment. Grounded in energy-conscious building and site design, studio coursework is intended to promote the practical application of learned theory in building systems, construction technology, ethical practice and cultural traditions in architecture. Students in their thesis year will develop their own projects and programs, work with their own "clients," and research a hypothetical issue to gain insight into project goals, design intentions, meaning, and new concepts. During thesis, a yearlong exploration, students spend a semester on research, site design, and analysis, then work on their designs in the following semester. The program provides the context for students to develop their talents, explore and expand their capabilities, and gain confidence in their growing capacities as

architectural designers and advocates for the inner city and society. The program will seek to build social awareness, consciousness, and participation in the larger community. Students are encouraged to work with the agendas of, or directly with, communities and nonprofits throughout their studio and elective offerings. This process exposes them to the diverse requirements, needs, and relationships of people and place, and encourages them to solve problems. Classes also encourage collaboration, teamwork and multidisciplinary design in which students learn the requirements of regulatory laws and the interests of communities in the development of place – both at the urban and site levels of design thinking.

The proposed curriculum will provide students with an option to pursue a BFA (awarded at the completion of 120 credits at the end of the senior year) and to pursue a master of architecture (M. Arch) in the following four semesters, including the two summers, contingent upon admission to the advanced degree. Students who transfer from other undergraduate majors at MassArt, with experience that is consistent with the learning and technical outcomes in competency, may work with a faculty advisor and evaluator and program director to demonstrate what they have completed to date, what they have learned, and how it relates to the competency. These students would then be placed appropriately within the sequence. The proposed Master of Architecture requires completion of 120 undergraduate credit hours plus 60 graduate credit hours.

RESOURCES AND BUDGET (Attachment B)

Library. 4,973 of the College's library titles are related to architecture. These titles will provide the foundation to build an advanced collection for the study of architecture at the graduate level. Over the next few years, the Library intends to exceed the recommended number of titles and to develop a collection equaling the definition of the RLG Collection Level 3b Study or Instruction Support Level, Advanced. The College hopes to support this goal through budget supplements and donation appeals to alumni and friends. In August 2007 the Library was promised the library of a major Boston architectural and planning firm, which will include hundreds of titles. During fiscal year 2007, the Library spent \$7,402 on new acquisitions on architecture adding 166 titles. In FY 2008 the Library intends to spend a similar amount developing the collection.

Faculty and Administration. The architecture program will be housed in the Department of Environmental Design and administered by the M. Arch Program Director; 1.5 new and permanent positions have been requested to support current growth in the undergraduate program and also support a position to be shared by the undergraduate and graduate programs. This new faculty member will teach and coordinate the construction programs within the program. Understanding that many studio architecture faculty have practices, the College anticipates that the majority of graduate design studios will be taught by adjuncts hired for particular courses.

The M. Arch Program Director and additional support staff will need to be appointed, and the Library holdings specific to architecture will be increased. As this program grows, additional faculty will need to be hired to implement the curriculum. The appointment of graduate teaching assistants is intended to help staff the undergraduate architecture offerings as well as help build a strong sense of community.

Fiscal. The expectation is that the program will incur start-up losses of approximately \$22,000-25,000 in years 2006/7 through 2008/9 and become profitable beginning in the 2009/10

academic year. The proposed program is expected to be profitable in the long-term with projected annual profits in excess of \$90,000 when it attains full enrollment of thirty students in 2011-2012. A copy of the budget is attached as Attachment B.

Advisory Board. The Architecture Department has begun to identify an external advisory committee to provide insight and commentary on the major areas/and goals of the curriculum, program development as the field evolves and to provide overview of the program goals. It will include professionals in the following areas to support the individual areas within the program: Urban Planning, Design, Construction and Construction Technology, Sustainable Design, Artisanry, and Community and design-build initiatives. The Committee will also include academics at other institutions, professionals who are overseas, and graduates from the College's program.

PROGRAM EFFECTIVENESS

The Master of Architecture program will prepare students for licensure as architects. The licensure organization is the National Council of Architecture Registering Boards (NCARB), which administers the national licensing exam after students have matriculated from an accredited National Architectural Accrediting Board (NAAB) and fulfilled the required three-year internship, which must be served under a registered and practicing architect in the full range of practice. The College anticipates that the majority of program students will pass and that, consistent with current graduates, up to 20% of these graduates may go on to open their own architectural or design/build firms. In July 2007 the College was granted a four-year Candidacy with an interim Candidacy visit in 2009. MassArt anticipates final NAAB accreditation for the M. Arch. Program in 2011.

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

The National Architectural Accrediting Board (NAAB) is the sole agency authorized to accredit U.S. professional degree programs in architecture. Because most state registration boards in the United States require any applicant for licensure to have graduated from an NAAB-accredited program, obtaining such a degree is an essential aspect of preparing for the professional practice of architecture. The proposed program was reviewed February 11-14, 2007, by a Candidacy Visiting Team from NAAB, including Team Chair, C. William Bevins, FAIA, FreemanWhite, Inc, Charlotte, NC; Rodney B. Wright, AIA, School of Architecture, Florida A&M University; Sharon C. Matthews, AIA, Executive Director, National Architectural Accrediting Board; and Cathleen M. Ryan, AIA, Associate Executive Director, National Architectural Accrediting Board. Based on the report of the team, the NAAB voted on July 19, 2007, to grant candidacy status to the MassArt M..Arch. program.

In its report, the Visiting Team stated that the College administration and faculty clearly understood the importance of NAAB accreditation to the mobility of MassArt graduates and that NAAB accreditation was a strategic priority for the program as it looked toward the future. The team identified three causes of concern:

- The architecture program at MassArt seems "disconnected" from the national community of architectural schools. The team recommends MassArt join the ACSA and begin participating in ACSA meetings.

- MassArt needed to support the development of a strong AIAS chapter, including provision of the necessary physical and financial resources from the College to ensure the chapter's ongoing success.
- The College needed to provide additional administrative and faculty resources necessary for an M Arch program as soon as possible.

In its response, the College indicated the steps it had taken to address each concern, including joining and participating in ACSA; supporting with space, faculty mentoring, materials and payment of dues the initiative of students in the Architecture Design Department, who started an American Institute of Architecture Students (AIAS) chapter at Massachusetts College of Art; and the planned addition of 1.5 new and permanent as well as additional adjunct faculty positions.

STAFF ANALYSIS AND RECOMMENDATION

Board staff thoroughly reviewed all documentation submitted. Staff recommendation is for approval of the Master in Architecture at the Massachusetts College of Art and Design.

Upon graduating the first class for this program, the College shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty resources and program effectiveness.

Attachment A - Curriculum Outline
Master of Architecture

Major Required (Core) Courses (Total # of courses required = 8. Note that studio courses and the construction course carry additional credits.)		
Course Number	Course Title	Credit Hours
AD600	Architectural Design VI	6
AD601	Artisanry + Construction	6
AD700	Architectural Design VII	9
AD720	Advanced Building Systems – Mechanics and Technology	3
AD750	Architectural Design VIII	9
AD760	Thesis Preparation	3
AD770	Professional Practice	3
AD800	Thesis	12
	Subtotal # Core Credits Required	51
<p>Elective Course Choices (Total courses required = 3) List from following menu. Note that Research is independent student work with a selected faculty member; and Graduate Architecture Internship is student work in offices outside the program with advising from full-time faculty within the program and counts toward a portion of IDP (professional development requirements for licensure both during and post-matriculation). Students will be advised, for example, if they are missing requirements in Architectural History for NAAB; otherwise, all courses are fully electives.</p>		
AD715	Topics in the History of Architecture	3
AD725	Research in Architecture	3
AD735	Advanced Lighting and Daylighting	3
AD745	Real Estate Development	3
AD755	Seminar on Materials, Details + Fabrication	3
AD765	Seminar on Housing and Development	3
AD775	Graduate Architecture Internship	3
AD785	Sustainable Site Design	3
	Subtotal # Elective Credits Required	9
Curriculum Summary		
Total number of courses required for the degree		11
Total credit hours required for degree		60
<p>Prerequisite, Concentration or Other Requirements: Preparatory Prerequisites for incoming students from architectural programs other than MassArt, or without an undergraduate degree in Architecture (Students would be reviewed on an individual basis): AD2XX: Technical Drawing/AutoCAD tutorial (workshop) AD227: Architectural Structures I AD223: Architectural Design I</p>		

AD310 Architectural Design II
AD317 Architectural Structures II
AD327 Architectural Structures III
AD350 Building Components + Details
AD3X0 Sustainable Architecture
AD3X2 / SC3X2 Technology + Culture

Architectural History courses (CSA) from a selection, students must choose two:

CSAXXX World Architecture
CSAXXX Medieval Architecture
CSA 321 History of Modern Architecture
CSA34X History of Ancient Architecture

For students from other architectural programs without construction experience, this class would be offered in the summer preceding the commencement of the graduate program:

AD5XX: two-week Construction Intensive – We currently have an agreement to teach this through the North Bennett Street School in Boston, starting June 2008.

Attachment B
Budget

M. ARCH PROGRAM BUDGET

One Time/ Start Up Costs	Cost Categories	Annual Expenses			
		Year 1	Year 2	Year 3	Year 4
	Full-time Faculty (see above)	\$0	\$0	\$0	\$0
	Part-time/Adjunct Faculty (Salary and Fringe)	\$105,000	\$108,150	\$111,395	\$114,735
	Program Director and Staff	\$50,000	\$55,000	\$56,650	\$58,350
	General College Support	\$49,014	\$67,793	\$86,912	\$89,519
	Student Assistantships	\$25,000	\$30,000	\$37,500	\$37,500
	Instructional Materials, Library Acquisitions	\$2,400	\$12,400	\$12,400	\$12,400
	Facilities/Space/Equipment	\$16,000	\$20,500	\$19,500	\$19,500
	Marketing	\$10,500	\$11,025	\$11,578	\$16,157
	Visiting Artists/Lecturers	\$4,500	\$5,000	\$5,000	\$5,000
	NAAB Visit Expenses		\$4,500		\$4,500
	NAAB Maintenance Fee	\$250	\$400	\$400	\$400
	Conference, Travel Costs	\$1,000	\$1200	\$1500	\$1500
	TOTALS	\$263,664	\$311,468	\$347,335	\$355,061

One-Time/Start-Up Support	Revenue Sources	Annual Income			
		Year 1	Year 2	Year 3	Year 4
	Tuition	\$245,068	\$338,964	\$434,559	\$456,287
	Application Fees	\$1,500	\$2,250	\$2,250	\$2,250
	TOTALS	\$246,668	\$341,214	\$436,809	\$458,537