

BOARD OF HIGHER EDUCATION

REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Academic Affairs

NO: AAC 19-02

COMMITTEE DATE: October 16, 2018

BOARD DATE: October 23, 2018

APPLICATION OF THE UNIVERSITY OF MASSACHUSETTS AMHERST TO AWARD THE MASTER OF FINANCE IN ALTERNATIVE INVESTMENTS

MOVED: The Board of Higher Education hereby approves the application of the **University of Massachusetts Amherst** to award the **Master of Finance in Alternative Investments**.

Upon graduating the first class for this program, the University 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.

VOTED BY AAC: That AAC Motion 19-02 move forward without a recommendation for consideration by the full Board of Higher Education at its next regularly scheduled meeting, subject to receiving the following additional information: 1) updated data regarding the anticipated student population to be served, 2) a clearer picture of how the program connects to the University's mission; and 3) the program's relationship to affordability and access.

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

Contact: Winifred M. Hagan, Ed.D., Associate Commissioner for Academic Affairs and Student Success

BOARD OF HIGHER EDUCATION
October 2018
University of Massachusetts Amherst
Master of Finance in Alternative Investment

INTENT AND MISSION

The University of Massachusetts Amherst (UMA) reports that its' Isenberg School is a thought leader for alternative investment research and intends that the proposed Masters' of Finance in Alternative Investments program (MFAI) will be natural fit that would enable faculty to incorporate research into classroom teaching, use actual case studies, and interact with industry guest speakers, which in turn, is expected to inspire new research. It is planned that the program will fall under the authority of UMA's Continuing and Professional Education for tuition purposes.

The purpose of the proposed program is to provide students with knowledge and skills in alternative investments. It is planned that the curriculum will cover hedge funds, private equity, venture capital, commodities, real estate, infrastructure investments, risk management and financial derivatives, green/sustainable finance, and funds of hedge funds. UMA plans that graduates will be employed by financial institutions such as university endowments, pension funds, money managing firms, private equity firms, consulting companies, and governments as analysts, personal investment advisors, risk officers, compliance officers, traders, portfolio managers, consultants, researchers, and financial economists.

A number of the functions related to the delivery of academic programs at the Isenberg School are centralized. The Marketing and Communications unit develops the promotional materials required to recruit students. The Graduate & Professional Programs Office handles admissions and program operations. It is intended that the centralization of these functions allows for the academic department to focus on the delivery of academic programming and research. In addition, this is expected to allow the university to establish a competitive tuition rate for the proposed program.

The proposed program has obtained all necessary governance approvals on campus and was unanimously approved by the University of Massachusetts' Board of Trustees on September 19, 2018. The required letter of intent was circulated on April 30, 2018. No comments were received.

NEED AND DEMAND

National and State Labor Market Outlook

UMA reports that about 170,000 people or 5.3% of working population of the Commonwealth works in the financial industry, and the proposal assumes that alternative investment is the fastest growing area within the industry. UMA further reports that according to the accounting firm Price Waterhouse Cooper (PwC), the alternative investment segment is expected to grow fivefold in the next 5 years. It is also reported that in a recent job posting analysis by

Eduventures¹ that alternative investments are the most relevant hard skill in all of the finance jobs in the state of Massachusetts. UMA cites that the total number of job postings related to the alternative investment was 1464, which ranked number 4 among all areas of finance.

The entry-level job titles for graduates of the proposed program are expected to be analyst, wealth management advisor, assistant family office manager, financial marketer, assistant portfolio manager, risk officer, compliance officer, due diligence officer, pension consultant, client relationship manager, research associate and junior trader. UMA suggests that there is a significant need in multiple regulatory settings for employees who can understand complex investment products and processes. Based on the projection from Massachusetts Executive Office of Labor and Workforce Development, for the position of personal financial advisors alone, the employment was 7,827 in 2014 and will be increased to 9,208 in 2024, with a total growth rate of 17.64%.

Student Demand

Based on a 2018 UMA Isenberg School survey, 245 finance majors responded that they are interested in pursuing the proposed program within 3 years. In addition, UMA indicates that many programs in the country with Chinese students are expected to be a pipeline for the proposed program due to China's approximately 40,000 private funds (including both private equity funds and hedge funds) registered with regulators.

OVERVIEW OF PROPOSED PROGRAM

The proposed program is expected to consist of ten courses delivered both in classrooms and on-line, for a total of thirty credits over a period of three semesters, including fall, spring, and summer. It is planned to be offered as a full-time Isenberg School of Management program, located in Continuing and Professional Education, and taught by finance faculty and industry leaders from the Chartered Alternative Investment Analyst Association (CAIA²).

Duplication

Few programs exist in the emerging area of Alternate Investments. There are several general Master of Finance programs in Massachusetts and the US, ranging from 50-500 students with majority international students.

¹ Boston-based research and advisory company

² CAIA is a not-for-profit education organization in the field of alternative investments. While there is no one definition of alternative investments, these include asset classes that go beyond equity and debt markets. CAIA offers a professional designation in alternative investments and is globally recognized as the mark of distinction in alternative investments. CAIA was co-founded by the Center for International Securities and Derivatives Markets (CISDM). CISDM was founded by Finance Department faculty and resides in the Isenberg School. Finance Department faculty developed the educational materials (including textbooks) that serve as the foundation for earning the CAIA professional credential.

ACADEMIC AND RELATED MATTERS

Admission

The proposed admissions process is expected to take into account a number of criteria including test scores, grade point average, essays, resume, work experiences, letters of recommendation, and an interview. An Admissions Committee comprised of admissions staff and finance faculty will evaluate candidate applications. It is planned that admissions decisions will serve to build a diverse, qualified cohort. Candidates will be required to hold a bachelor's degree or its equivalent³ from a recognized academic institution and have an overall grade point average of B (3.0 on a 4.0 scale). The admission process will weigh a quantitative background and undergraduate degrees in sciences, engineering, mathematics, and appropriate economics and business programs favorably. An official Graduate Management Admission Test (GMAT) or official Graduate Records Exam (GRE) score will also be required. Candidates with undergraduate degree from a foreign country and a primary language other than English will be responsible to take the TOEFL exam with a minimum score of 80 on the internet-based test. In addition, candidates will be expected to provide two letters of recommendation, a resume, an essay, and a personal interview.

Program Enrollment Projection

	Year 1	Year 2	Year 3	Year 4*
New Full Time	40	48	58	69
Continuing Full Time	One-year program			
New Part Time				
Continuing Part Time				
Totals	40	48	58	69

Curriculum (Attachment A)

UMA plans that cohorts will be 25% domestic and 75% international students. UMA finds that most of the enrolled students in MS programs are from overseas, especially from China, due to economic growth and the financial industry, and one-child policy in China. UMA further expects

³ Admission to any graduate degree program at the University of Massachusetts requires a successful applicant to hold an undergraduate degree that is either a bachelor's degree or its equivalent. For students who complete their undergraduate studies abroad, the Graduate School has established standards and protocols for evaluating degrees from colleges and universities outside to the U.S. to determine whether they are equivalent to a U.S. bachelor's degree.

most graduates of the proposed program to return to China and Hong Kong to fill significant job openings there. It is expected that the program will start in the Fall of 2019, continue in Spring 2020, and finish in the Summer of 2020 with 10 courses offered and 30 credits in total. UMA expects a 90-100% graduation rate given the strict admission criteria and effective delivery of the course materials from UMA instructors.

Internships or Field Studies

UMA plans no internships or field studies for this program.

RESOURCES AND BUDGET

Fiscal (Attachment B)

UMA plans that the proposed program will be located in Continuing and Professional Education in order to charge \$1,700 per credit tuition. Based on 30 credits from 10 courses, UMA projects the first-year gross income to be at \$51,000 per student or \$2.04 million for 40 students. The operating expenses are projected at \$400,000 to include instructor compensation, staff salary, marketing and administrative costs. The net income for the first year is expected to be \$1.64 million. The annual growth for enrollment is projected at 20% with an annual tuition increase of \$100 per credit. The fifth-year gross income is projected at \$5.23 million.

Faculty and Administration (Attachment C)

UMA plans a faculty director for the proposed program with administration, admissions and operations to be handled by the Graduate Program Office. The Isenberg School of Management is an academic partner of CAIA, which is the official provider for the professional designation, CAIA Charter. This global organization has more than 12,000 Charter holders globally. The textbooks used by this program were co-authored by a professor from the Isenberg School of Management. It is planned that the professor will work with the managing director of the CAIA Association, teaching two courses. The CAIA Association has agreed to offer a limited number of scholarships to graduates to sit for the CAIA exam.

Facilities, Library and Information Technologies

The classroom portion of the program will be conducted at the new financial education center located at the Isenberg School. The center is expected to be equipped with Bloomberg terminals with live market data, and computer terminals with access to financial databases. The department currently has access to several databases including the CISDM/Morningstar Hedge Fund/CTA database, CRSP database for historical stock prices, Compustat for accounting data, Optionmetrics for options data, Morningstar Direct mutual fund data and Thomson Financials

13F institutional holdings data. Students will also be able to obtain Bloomberg certification⁴. UMA plans for one administrative staff member to help manage the center and work with the faculty program director.

PROGRAM EFFECTIVENESS

Goal	Measurable Objective	Strategy for Achievement	Timetable
Graduate rate	90-100%	Strict admission criteria High-quality instruction	First class summer 2020
Faculty addition	1 tenure track faculty	AFA/FMA recruiting	Fall 2019
Enrollment growth	20-50%	Marketing and collaborating with CAIA	Fall 2020
Placement	Over 90% domestic and international placement within one year from graduation	Placement service Help from board members and alumni	Fall 2021
Salary	Above or equivalent to those graduated from similar MS programs in the school	Placement service and connections with the industry	Fall 2021

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

The program was externally reviewed by William N. Goetzmann, the Edwin J. Beinecke, Professor of Finance & Management Studies and Director of International Center for Finance, at the Yale School of Management; and Turan G. Bali, the Robert Parker Chair Professor of Finance at Georgetown University's McDonough School of Business.

The reviewers indicated that they found the proposed curriculum to be excellent and the organizational framework to be well conceived. They found the proposed curriculum to cover major areas in alternative investments, including hedge funds, private equity, venture capital, real estate/assets, sustainable finance, emerging markets, and funds of hedge funds. In addition, the team indicated that the proposed introductory courses in corporate financial, data analysis and statistics, and derivatives and risk management will be a good preparation for students to succeed in more advanced courses. Further, the curriculum was described by these reviewers as *“having an excellent sequence of courses that cover all of the major topics in*

⁴ Bloomberg certification refers to the level of proficiency a student must demonstrate to be permitted to work independently on a Bloomberg Terminal. UMA requires that students become familiar with how to use these terminals and pass a test before gaining independent access.

alternative investments and reflects a keen knowledge of where the field is at this time". The reviewers commented that the courses are clearly appropriate for the Master of Finance in Alternative Investments in that the area encompasses a disparate range of investments.

The reviewers found the proposal to offer rich facilities, equipment, and other data/online resources to the students and that the Finance Department has all the relevant datasets to serve the proposed program. They noted that alternative asset management is a growing sector of the finance industry and it requires specialized knowledge quite different from standard neo-classical finance. They stated that there is no doubt there will be sustained demand for the program and demand in the institutional money management industry for graduates. They found the one-year program is standard in the industry.

STAFF ANALYSIS AND RECOMMENDATION

Staff thoroughly reviewed all documentation submitted by the **University of Massachusetts Amherst** and external reviewers. Staff recommendation is for approval of the proposed **Master of Finance in Alternative Investments** program.

ATTACHMENT A: CURRICULUM

Master of Finance in Alternative Investment

Major Required (Core) Courses (Total courses required = 2)		
<i>Course Number</i>	<i>Course Title</i>	<i>Credit Hours</i>
SCH-MGMT 640	Financial analysis and decision-making	3
SCH-MGMT 650	Business data analysis and statistical methods	3
	SubTotal # Core Credits Required	6
Concentration Course Choices (Total courses required = 8)		
SCH-MGMT 681	Derivative strategies and risk management	3
SCH-MGMT 508	Alternative investments	3
SCH-MGMT 682	Hedge funds	3
SCH-MGMT 683	Private equity and venture capital	3
SCH-MGMT 684	Sustainable finance: Environmental, social, and governance issues on capital markets	3
SCH-MGMT 685	Emerging markets	3
SCH-MGMT 686	Real assets: Real estate, infrastructure and beyond	3
SCH-MGMT 687	Managing the managers: Asset allocation, funds of hedge funds, and due diligence	3
	SubTotal # Concentration Credits Required	24
Curriculum Summary		
Total number of courses required for the degree		10
Total credit hours required for degree		30
Prerequisite or Other Additional Requirements:		

ATTACHMENT B: BUDGET

Master of Finance in Alternative Investments Continuing & Professional Education

REVENUE ESTIMATES					
	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022
<i>Full-Time Tuition Rate: In-State</i>	51000	54000	57000	60000	63000
<i>Full-Time Tuition Rate: Out-State</i>	51000	54000	57000	60000	63000
<i>Mandatory Fees per Student (In-state)</i>					
<i>Mandatory Fees per Student (out-state)</i>					
<i>FTE # of New Students: In-State</i>	10	12	14	17	21
<i>FTE # of New Students: Out-State</i>	30	36	43	52	62

Tuition and Fees	Newly Generate d Revenue	Revenu e from existin g progra ms	Newly Generate d Revenue	Revenu e from existin g progra ms	Newly Generate d Revenue	Revenu e from existin g progra ms	Newly Generate d Revenue	Revenu e from existin g progra ms	Newly Generate d Revenue	Revenu e from existin g progra ms
First Year Students										
Tuition										
In-State	\$510,000	\$0	\$648,000	\$0	\$820,800	\$0	\$1,036,800	\$0	\$1,306,368	\$0
Out-of-State	\$1,530,000	\$0	\$1,944,000	\$0	\$2,462,400	\$0	\$3,110,400	\$0	\$3,919,104	\$0
Mandatory Fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gross Tuition and Fees	\$2,040,000	\$0	\$2,592,000	\$0	\$3,283,200	\$0	\$4,147,200	\$0	\$5,225,472	\$0
Grants	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Campus budget allocation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Revenues (specify in cell 54)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$2,040,000	\$0	\$2,592,000	\$0	\$3,283,200	\$0	\$4,147,200	\$0	\$5,225,472	\$0

EXPENDITURE ESTIMATES

	Year 1		Year 2		Year 3		Year 4		Year 5	
	2018		2019		2020		2021		2022	
	New Expenditures required for Program	Expenditures from current resources	New Expenditures required for Program	Expenditures from current resources	New Expenditures required for Program	Expenditures from current resources	New Expenditures required for Program	Expenditures from current resources	New Expenditures required for Program	Expenditures from current resources
Personnel Services										
Faculty	\$100,000	\$0	\$100,000	\$0	\$100,000	\$0	\$100,000	\$0	\$100,000	\$0
Administrators	\$60,000	\$0	\$61,800	\$0	\$63,654	\$0	\$65,564	\$0	\$67,531	\$0
Support Staff	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Others	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fringe Benefits <u>30</u> %	\$18,000	\$0	\$18,540	\$0	\$19,096	\$0	\$19,669	\$0	\$20,259	\$0
Total Personnel	\$178,000	\$0	\$180,340	\$0	\$182,750	\$0	\$185,233	\$0	\$187,790	\$0
Operating Expenses										
Supplies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Library Resources	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Marketing/Promotional Expenses	\$163,200	\$0	\$207,360	\$0	\$262,656	\$0	\$331,776	\$0	\$418,038	\$0
Laboratory Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
General Administrative Overhead	\$163,200	\$0	\$207,360	\$0	\$262,656	\$0	\$331,776	\$0	\$418,038	\$0
Other (specify)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Operating Expenses	\$326,400	\$0	\$414,720	\$0	\$525,312	\$0	\$663,552	\$0	\$836,076	\$0

Net Student Assistance										
Assistantships	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fellowships	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Stipends/Scholarships	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Student Assistance	\$100,000	\$0	\$100,000	\$0	\$100,000	\$0	\$100,000	\$0	\$100,000	\$0
Capital										
Facilities / Campus recharges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenditures	\$604,400	\$0	\$695,060	\$0	\$808,062	\$0	\$948,785	\$0	\$1,123,865	\$0

BUDGET SUMMARY OF NEW PROGRAM ONLY

	Year 1 2018__	Year 2 2019__	Year 3 2020__	Year 4 2021__	Year 5 2022_
Total of newly generated revenue	\$2,040,000	\$2,592,000	\$3,283,200	\$4,147,200	\$5,225,472
Total of additional resources required for program	\$604,400	\$695,060	\$808,062	\$948,785	\$1,123,865
Excess/ (Deficiency)	\$1,435,600	\$1,896,940	\$2,475,138	\$3,198,415	\$4,101,607

Justification of Financial Projections: marketing expenses are 8%, overhead charge is also 8%. The salary increase for the administrator is 3% per year. Given most of the courses are new, the faculty compensation is \$10,000 per course. The student assistantship is \$20,000 per student for 5 students.

ATTACHMENT C: FACULTY

(Name, Degree and Field, Title)	Tenured Y/N	Courses Taught (C) core course (OL) online.	# of sections	Division or College of Employment	Full- or Part-time in Program	Full- or part-time in other department or program	Sites where individual will teach program courses
Liang, Bing PhD in Finance Professor of Finance	Y	• Hedge Funds (C)	(1)	Isenberg School of Management	Full-time	No	• Main Campus
Hossein Kazemi PhD in Finance Professor of Finance	Y	• Private Equity and Venture Capital (C)	(1)	Isenberg School of Management	Full-time	No	• Main Campus
Hossein Kazemi PhD in Finance Professor of Finance	Y	• Financial analysis and decision-making (C)	(2)	Isenberg School of Management	Full-time	No	• Main Campus
Nikunj Kapadia PhD in Finance Professor of Finance	Y	• Derivative strategies and risk management (C)	(1)	Isenberg School of Management	Full-time	No	• Main Campus
Mila Getmansky Sherman PhD in Finance Professor of Finance	Y	• Alternative Investments (C)	(1)	Isenberg School of Management	Full-time	No	• Main Campus

Robert Nakosteen PhD in Economics Professor of Operations & Information Mgmt	Y	<ul style="list-style-type: none"> • Business data analysis and statistical methods (C) 	(2)	Isenberg School of Management	Full-time	Yes- Dept. of Operations & Information Mgmt	<ul style="list-style-type: none"> • Main Campus
Nikos Artavanis PhD in Finance Assistant Professor of Finance	N	<ul style="list-style-type: none"> • Emerging Markets (C) 	(1)	Isenberg School of Management	Full-time	Yes-Dual appointment with the Honors College	<ul style="list-style-type: none"> • Main Campus
Ginnie Gardiner PhD in Finance Lecture of Finance	N	<ul style="list-style-type: none"> • Real assets: Real estate, infrastructure and beyond (C) 	(1)	Isenberg School of Management	Full-time	No	<ul style="list-style-type: none"> • Main Campus
Theresa Gusman BA in Economics CEO ENDURANCE LLC	N	<ul style="list-style-type: none"> • Sustainable finance: Environmental, social, and governance issues on capital markets (C) 	(1)	ENDURANCE LLC	Part-time	Yes-ENDURANCE LLC	<ul style="list-style-type: none"> • Main Campus
Keith Black PhD in Finance Managing Director at CAIA	N	<ul style="list-style-type: none"> • Managing the managers: Asset allocation, funds of hedge funds, and due diligence (C) 	(1)	CAIA	Part-time	Yes-Full time at CAIA	<ul style="list-style-type: none"> • Main Campus