

BOARD OF HIGHER EDUCATION
REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Academic Affairs

NO.: AAC 12-06

COMMITTEE DATE: November 29, 2011

BOARD DATE: December 6, 2011

APPLICATION OF UNIVERSITY OF MASSACHUSETTS LOWELL TO AWARD THE DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION

MOVED: The Board of Higher Education hereby approves the application of **University of Massachusetts Lowell** to award the **Doctor of Philosophy in Business Administration**.

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.

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

Contact: Dr. Francesca Purcell, Associate Commissioner for Academic and P-16 Policy

BOARD OF HIGHER EDUCATION

October 2011

University of Massachusetts Lowell Doctor of Philosophy in Business Administration

INTENT AND MISSION

The University of Massachusetts Lowell (UML) filed an expedited application to offer the Doctor of Philosophy in Business Administration. The proposed Ph.D. intends to focus on the development of relevant, interdisciplinary research skills applied to current and future business problems and challenges. Students will master traditional academic research methodologies grounded in current industry trends and also be versed in the practical application of advancing economic and regional development locally, nationally and internationally. UML intends to launch technology management, finance, and management information systems specializations in the first year and international business and leadership specializations after three years. Graduates will be prepared for academic careers, research careers and upper-level executive positions in both public and private companies.

The delivery of the Ph.D. in BA by the Lowell campus is aligned with UML's strategic plan, *UMASS Lowell 2020: A Strategic Plan for the Next Decade*, to meet both the academic and industry needs of the Commonwealth for advanced business education in the critical areas of Technology Management, International Business, Leadership, Finance and MIS. In addition, the proposed Ph.D. also is under the College of Management's mission, which states: "*The College of Management prepares students for professional business careers in a global environment while serving as a hub of industry partnerships fostering regional economic development through education, research and outreach activities.*"

The final proposal was approved by the University Board of Trustees on May 25, 2011. In accordance with Board of Higher Education guidelines for the expedited review of new programs, a letter of intent for the proposed program was distributed to all public colleges and University presidents and chancellors. No comments in response were received.

NEED AND DEMAND

In 2003, The Association to Advance Collegiate Schools of Business (AACSB) detailed the looming shortage of qualified Ph.D. level scholars¹. The report predicted that by 2014 there would be a significant gap between the needs of higher education business schools and available pool of qualified candidates – specifically they predicted that there would be a shortfall of almost 2,500 business Ph.D.s. Since the AACSB report was almost published a decade ago, little has changed relative to the Ph.D. shortage. For example, *Solving the Doctoral Dilemma* (March/April 2009, BizEd) highlights the on-going struggles of business schools to grow and evolve as a direct result of the inability

¹ Association to Advance Collegiate Schools of Business. (2003). Sustaining scholarship in business schools. St. Louis, MO: Author.

to find Ph.D. qualified faculty and offers six concrete solutions for the problem – one of which is the launch of new Ph.D. programs nationally and internationally. In a more recent report in the Chronicle of Higher Education (Sept. 1, 2010), the struggles of small colleges to meet AACSB accreditation were detailed, more specifically the pressure that smaller colleges are under to find Ph.D. holding faculty. The author commented that the shortage is so acute that soon smaller business schools would need to either choose between getting accredited or shutting their doors.

Shortages are also occurring across specific business domains. Within accounting, the shortage of accounting scholars is being caused by a lack of incoming students, a high rate of retirement among current accounting scholars, and the “brain drain” associated with foreign born nationals receiving Ph.D.s in the United States, then returning to their home countries². This is true of the other business disciplines as well. Researchers, for example, have also demonstrated that the shortage is making it more difficult to find, hire, and retain finance³ and operations⁴ Ph.D. graduates.

The Wall Street Journal has also reported on the adverse effect the Ph.D. shortage is having on the hiring and retention of Ph.D.s in BA, specifically commenting on the skyrocketing compensation of Ph.D.s due to the shortage.⁵

The current shortage of Ph.D. candidates in business disciplines is evaluated annually by the AACSB along with the projected faculty retirements and resulting salary compression. The gap is so severe that the AACSB has slightly relaxed Ph.D. faculty coverage standards required in professionally accredited programs and developed a ‘bridge’ program for Ph.D.s out of field, to study and become ‘academically qualified’ in business. It is projected that even with these adjustments, the shortage for Ph.D.s in Business is still significant within the foreseeable future.

Private accredited universities and colleges in Massachusetts offering Ph.D.s in business include Harvard (2009: enrollment 50), MIT (2010: enrollment 127), Boston College (finance only), Boston University (enrollment not available), and Bentley University (enrollment not available). Public universities offering Ph.D.s in business in the region include UMass Amherst (2010: Enrollment 65) and the University of Connecticut (conferred 12 degrees (total) in 2009 and 2010). According to UML, the enrollment trends for the existing programs appear to be relatively stable.

ACADEMIC AND RELATED MATTERS

The proposed curriculum will consist of a minimum of 46 credits of in-class coursework (including core courses, specialization courses and electives) and 18 credits of dissertation. Students will be required to pass the qualifying exam and the dissertation. Core courses will provide the foundation for a research-intense terminal degree such that all students will have a common understanding of the nature and manner of scientific inquiry. All specializations will be required to take Research Design Methods I

² A Profession’s Response to a Looming Shortage: Closing the Gap in the Supply of Accounting Faculty, M. Ruff, J. Thibodeau, & J. Bedard. *Journal of Accountancy*. New York: Mar 2009. Vol. 207, Iss. 3

³ Estimating the Mark-to-Market Premium Required to Fill Vacant Business School Faculty Lines: The Case of Finance. B. Hobbs, H. Weeks, and J. Finch. *Journal of Education for Business*. Washington: May/June 2005. Vol. 80, Iss. 5

⁴ And Who Will Teach Them? An Investigation of the Logistics Ph.D. Market. S. Golicic, L. Bobbitt, R. Frankel, & S. Clinton. *Journal of Education for Business*. Washington: Sep/Oct 2004. Vol. 80, Iss. 1

⁵ Ph.D. Shortage: Business Schools Seek Professors. http://online.wsj.com/article_email/SB116830887516070925-1MyQjAxMDE3NjA4OTMwMDk4Wj.html

and II, Statistics, and Econometrics. The program also will embed a level of flexibility into the core due to the inevitable diversity in research approaches across fields. For example, while the finance field is characterized by quantitative research methods, other fields, specifically technology management, entrepreneurship, and leadership will draw upon other research traditions, such as ethnographic methods. Electives will further tailor the program along the lines best suited to the Ph.D. candidate. Students will be required to take 12 elective credits.

The five specialization descriptions follow:

Finance specialization The finance specialization will develop scholars with a deep understanding of financial markets, investment theories, financial innovations and strategies, and the current challenges facing financial specialists. This program will be grounded with course content, research methodologies and projects developed collaboratively by faculty and financial industry partners to meet the research challenges facing the financial community.

Management Information Systems specialization The MIS specialization will focus on innovative and competitive IT/IS management theories, strategies and practices and their impact on organizations and society. Consistent with the other specializations, the MIS specialization will concentrate on current IT/IS challenges facing the industry today. IT/IS industry input and collaboration will be continually sought to develop appropriate projects and maintain currency in this program.

Technology Management specialization The technology management specialization will develop scholars that are thought leaders on the manner in which innovations, specifically in high technology industries, are managed across the technology life cycle. Ph.D. students will gain a thorough understanding of the existing research on the macro level, as well as the firm and managerial level. On the macro level, Ph.D. students will understand the nature of innovation cycles, industry structure, and competitive dynamics. Additionally, Ph.D. candidates will research the public and business policies that serve as the foundation of technology clusters. On the firm and managerial level, Ph.D. candidates will study the 'best practices' that technology firms employ to gain competitive advantage. They will focus on technology management in both entrepreneurial ventures, as well as established organizations, i.e. corporate entrepreneurship.

International Business specialization The IB specialization will prepare scholars who have interests in the theory, research, and practice of management with a cross-border or cross-cultural dimension. Given the trend of globalization and the importance of emerging economies, international business has become one of the fastest growing areas of interest by both academic researchers and practitioners. The IB track will prepare students with a thorough understanding of broad topics related to modern multinational enterprise, including evolving forms and management practices in cross-border business; the cross-border differential impact of cultural, social, economic, technological, political, and other institutional forces on strategies, organizational forms, and management practices; the international competitiveness of firms, industries, and nations. In addition, IB students will be encouraged to develop an area of functional specialization that

links international business theories to areas such as entrepreneurship, technology commercialization, and leadership in the era of knowledge management. Thus, they will be expected to establish a strong foundation for interdisciplinary research. Importantly, reciprocal arrangements with UML's international university partners who have already expressed strong interest in this experiential component of global learning have been established.

Leadership specialization The leadership specialization will craft scholars that have a thorough understanding of the complex facets of organizational leadership. Leadership is one of the most studied organizational dynamics, and still one of the least understood. Leadership Ph.D. students will be expected to develop a strong understanding of the theoretical lineage of leadership, from great man theory and trait theory up until more recent dynamic leadership theories. The curriculum will introduce aspects of various decision making theories to better understand the nature and manner in which organizational leaders make decisions and examine the intersection of leadership with ethics, diversity, corporate social responsibility, and sustainability.

The proposed Ph.D. will be able to be completed on a full- or part-time basis. It will be delivered year-round in three twelve-week sessions per year allowing for program completion within a seven year period from admission. Fall and spring sessions will begin with the traditional semesters and the summer session will begin one to two weeks after the conclusion of the spring session. The expectation is that full-time students will finish the program within four years; while part-time students will require no more than seven years.

Students will be encouraged and expected, early in their program, to identify a research area and develop (with guidance from their faculty advisor) a course of study supporting this interest. Students will also be expected to participate in a variety of research and teaching related activities sponsored by the Office of Research Administration, the Faculty Development Center and the College of Management.

UML intends to actively involve its College of Management Advisory Board in many aspects of this program including ongoing program and curriculum development, identification of current business issues, expansion of corporate research contacts, and input on dissertation topic proposals. The members of this 20 person board are established industry professionals and alumni.

Admission

To qualify for admission into the Ph.D. program, applicants are expected to be graduates of an accredited U.S. college or university or an approved foreign equivalent institution; have earned grade point averages of 3.0 or better in all prior undergraduate and graduate studies; and have a minimum of 4 years full time relevant work experience. Applicants must also submit a satisfactory GMAT taken within the last ten years and submit three letters of recommendation. International students are expected to at least meet the minimum UMass Lowell TOEFL requirements. The faculty admissions committee will review all of the above admissions materials in a portfolio approach.

Upon admission or through the successful completion of prerequisite courses, students will be expected to have successfully demonstrated graduate level knowledge in seven

functional areas: Accounting, Finance, Marketing, Organizational Behavior, MIS, Operations Management and Strategic Management. Additionally, they will demonstrate undergraduate competency in Calculus, Statistics and Micro/Macro economics.

Enrollment

Full-time students will be expected to complete the program in four years with the incentive being that financial support will be guaranteed for only four years. Part-time students will be allowed seven calendar years to finish; any student that exceeds this time frame will need to petition the Ph.D. committee for reinstatement with a distinct course of completion.

In year one, UML will admit up to six students, three full-time and three part-time, as a first cohort in three specializations, for a total of 18 students. UML will add a second cohort in each of these initial specializations in year three. A first cohort of the final two specializations will be launched in the fourth year, for a total of 48 students in year four.

In regard to broadening participation and completion by underrepresented and underserved groups, UML believes the program will address the shortage of underrepresented minorities in the ranks of business scholars in a number of ways. First, the proposed part-time enrollment option will provide a vehicle for working professionals from all groups to enter the program. The vast majority of regional Ph.D. programs maintains a residency requirement and requires participation on a full time basis. This barrier to entry has been cited as one of the primary reasons why individuals of all income levels have not pursued doctoral study. Second, UML’s diverse undergraduate and graduate body “feeds” into Ph.D. programs. Third, the admissions requirements were designed to allow for a candidate admissions portfolio to be evaluated where significant work experience and very strong professional references will be factored into the admissions process. UML also intends to participate actively in the Ph.D. Project which hosts an annual Doctoral Career Fair designed specifically for African American, Hispanic and Native Americans interested in pursuing Ph.D.s in business.

	# of Students Year 1	# of Students Year 2	# of Students Year 3	# of Students Year 4*
New Full Time	9	0	9	6
Continuing Full Time	N/A	9	9	18
New Part Time	9	0	9	6
Continuing Part Time	N/A	9	9	18
Totals	18	18	36	48

Student Learning Outcomes

Graduates of the proposed program will be able to:

- Conduct high-quality research relevant to private or public organizations
- Lead and partner effectively in research initiatives with other interested stakeholders, such economic think tanks and policy institutes
- Disseminate research findings through effective teaching, publication, and conference participation
- Serve as worldwide “ambassadors” for the UMass system
- Contribute or lead in other careers requiring research and analytical skills
- Demonstrate an unparalleled ethical perspective on research issues and approaches

RESOURCES AND BUDGET

Faculty

The proposed Ph.D. will be taught by full-time tenure-track faculty members. UML has been hiring faculty over the past several years with the academic credentials and research capability to participate in a Ph.D. program and has budgeted additional faculty for the College of Management to meet its shifting strategic enrollment targets and related faculty deployment plan. UML has engaged in faculty development over the last several years and reduced the teaching loads and increased the research productivity of the entire faculty. UML currently has thirty-six tenured and tenure track faculty in the College of Management. UML is also currently recruiting new faculty members for fall 2011.

Several faculty members in Economics will also serve as dissertation committee members and will be members of the university-wide graduate group that administers this program. The graduate group model will facilitate the collaborative and interdisciplinary deployment of faculty with relevant expertise across college boundaries. The graduate group model also makes possible the participation of appropriately qualified and interested faculty from other UMass campuses as well as from State universities. UML is currently deploying this model in collaboration with Salem State University in the recently approved Ph.D. in Criminology.

Administration

A faculty member will be appointed as the Ph.D. Program Coordinator who will serve also as the students' initial primary academic advisor. This Coordinator will report to the Dean of the College. The Vice Provost for Graduate Education will provide general oversight. As students further develop and refine their areas of desired study, appropriate faculty members conducting research initiatives in those areas of interest will become their primary advisors. Eventually, faculty Program Coordinators for each specialization will be necessary as the program reaches steady state.

The university-wide Graduate Group, as defined above, will oversee program development, delivery, research resources, assessment and continuous improvement. A faculty admissions committee, similar to existing masters admissions committee, will be established to review applications and make admissions decisions.

Library and Information Technology

The below resources are currently available to support the proposed program:

ABI Complete (ProQuest)

ABI Complete consists of a suite of three ABI/INFORM databases: *Dateline*, *Global*, and *Trade & Industry*. Together they provide comprehensive international coverage of business-related issues with access to over 4,700 full-text journals, 25,000 Dissertations, 14,000 SSRN working papers, along with key newspapers such as The Wall Street Journal and The Financial Times.

Accounting & Tax Database (ProQuest)

This accountant's database provides indexed coverage of over 2,300 publications along with full-text access to over 400 scholarly journals covering all aspects of accounting and tax issues.

Annual Reviews Economic Collection

The Annual Reviews Economic Collection consists of three Annual Review journals: *Economics*, *Financial Economics*, and *Resource Economics*. These three titles provide critical analysis of international finance and economics, monetary issues, markets and commodities, along with world-wide social and cultural impact factors.

Business and Company Resource Center

Business and Company Resource Center provides international business, company, and industry information including investment reports, company histories and financials, market data, and product information. The database features over 4,400 full-text journal titles as well as news articles and press releases.

Business Source Premier (Ebsco)

Business Source Premier includes over 2,300 full-text journals, including over 1,100 peer-reviewed titles with content dating back to 1886. All aspects of business are thoroughly covered, including marketing, management, MIS, POM, accounting, finance and economics.

Capital IQ (S&P)

Capital IQ offers an array of powerful applications for financial and investment-analysis research including real-time global market data, portfolio management, and financial risk modeling. It also provides extensive analytical information such as company and people intelligence, equity and market transactions, executive compensation data, and corporate actions.

Econlit (Ebsco)

EconLit is the online database of the American Economic Association. It contains indexed citations with searchable abstracts for over one million records dating back to 1969 covering all aspects of economics.

Emerald Management 120

The *Emerald Management 120* collection provides full-text access to nearly 160 peer-reviewed journals from Emerald Publishing engaged in a broad spectrum of research related to business and management, including marketing, training, finance, leadership, and more.

Historical Wall Street Journal (ProQuest)

The *Historical Wall Street Journal* database provides coverage from 1889 through 1991.

Hoover's Company Records (ProQuest)

Hoover's Company Records provides profiles of more than 40,000 companies, 600 industries, and 225,000 key executives.

JSTOR

JSTOR provides full-text access to over 100 academic journals in the fields of economics, management, statistics, marketing, and other business-related research subjects dating back to the 1830s.

National Bureau of Economic Research (NBER)

The NBER is the nation's leading nonprofit economic research organization. Its database provides access to all current Working Papers produced by NBER researchers plus an archive of papers dating back to 1973.

New Palgrave Dictionary of Economics

Published in 2008, the new 8-volume *Palgrave Dictionary of Economics* presents analysis from leading economists (including 25 Nobel Laureates in Economics) in a dynamic web environment that is updated on a quarterly basis.

Sage Premier Journal Collection

Nearly 100 of the more than 500 full-text journals available in the *Sage Premier Collection* are devoted to research in international business, economics, marketing, management and other related topics.

Science Direct (Elsevier)

Though most of the nearly 3,000 full-text journal titles available within ScienceDirect relate specifically to the hard sciences, well over 100 titles are devoted to business-related subjects such as management, economics, marketing, and accounting.

Wall Street Journal (ProQuest)

The *Wall Street Journal* database provides daily content from 1984 to the present.

WRDS

Wharton Research Data Services (WRDS) provides an integrated set of web-accessible analytical tools through a single user interface for accessing content simultaneously from multiple business research databases. The package of resources available to UMass Lowell includes the COMPUSTAT and CRSP databases along with the Eventus event-study software program. COMPUSTAT from S&P Primarily contains data reported by companies in standard financial reports, such as quarterly and annual income statements, balance sheets, and cash flow statements dated back to 1950. CRSP contains U. S. stock and indices data dating from 1925.

UML has a fully wireless facility, 100% high tech classrooms, and ample computer labs available for students as well as significant statistical packages available.

Fiscal (Appendix B)

According to the University, most of the resources required to field and sustain the proposed program are already in place.

PROGRAM EFFECTIVENESS

Goal	Measurable Objective	Strategy for Achievement	Timetable
1. To produce high quality Ph.D.s in BA	1a. Recruit high quality applicants consistent with target timeline	1a.1 Market Ph.D. to colleges and companies. 1a.2. Announce Ph.D. in academic newsletters and professional meetings. 1a.3. Develop a strong web presence 1a.4. Advertise to Alumni.	1a. Market 9 months before program launch and perform trend analysis of student profiles.
	1b. Ensure Ph.D. candidate research productivity	1b.1. Support research 1b.2. Fund professional travel	1b. Measure research output target; 1 refereed journal publication and 3 conference acceptances – ongoing.
	1c. Graduate high quality students within projected time lines.	1c.1. Continually monitor student progress 1c.2. Manage course offerings 1c.3. Manage faculty/staff support	1c. Track time to graduation - ongoing
	1d. Place students in quality positions	1d.1. Circulate faculty openings 1d.2. Support faculty networking 1d.3. Circulate research openings 1d.4. Support professional	1d. Track salaries and placements – ongoing.

	1e. Produce competitive graduates	conference participation 1e.1. Share internal faculty productivity measures 1e.2. Share characteristics of successful, internal new faculty hires	1.e. Track graduates research productivity, tenure, and promotions. - ongoing
2. Elevate research productivity of College of Management (COM)	2a. Increase COM refereed journal publications. 2b. Increase COM grant generation 2c. Increase faculty participation in professional conferences	2.a.1. Support research activities. 2.a.2. Continue to recruit research-oriented faculty. 2.b.1. Identify and support grant writing opportunities. 2.b.2. Work with other colleges on joint proposals. 2c. 1. Support professional travel. 2c.2. Encourage joint research.	2a.1. Track quality and quantity of faculty publications. 2.b. Track annual grant proposals, acceptances, research expenditures – ongoing. 2c. Track quantity and quality of annual professional presentations/proceedings, – ongoing
3. Improve faculty recruitment	3a. Recruit faculty with more research productivity 3b. Generate a wider and stronger pool of faculty applicants	3a.1. Recruit faculty to participate in Ph.D. program. 3a.2. Recruit faculty at higher ranks or with more established records. 3a.3. Recruit faculty with stronger educational profiles. 3b.1. Advertise more widely and note the Ph.D. program.	3a. Track new faculty research records and educational profiles. - ongoing 3b. Track applicant pool quantity and quality.
4. Increase visibility of College of Management	4a. Generate more faculty representation in the local press. 4b. Increase and elevate faculty participation at professional conferences 4c. Increase fundraising within COM	4a.1. Publicize faculty representation in the local press. 4a.2. Proactively advertise faculty strengths to local press. 4b.1. Fund professional travel to conferences. 4c.1. Publicize faculty/student research to companies, at alumni and in the press.	4a. Track local publications involving COM faculty. – ongoing 4b. Track faculty activities at conferences, keynotes and presentations.

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

The proposed program was reviewed by Robert D Galliers, DSc, Ph.D., The University Distinguished Professor and former Provost, Bentley University, Massachusetts; and V K Narayanan, Ph.D., Stubbs Professor of Strategy & Entrepreneurship and Associate Dean of Research, Drexel University, Pennsylvania.

The reviewers were impressed by the energy and enthusiasm of the faculty members and commended the recent new hires and plans for additional faculty hiring in key disciplines in the College. They noted “a palpable sense of dynamism and pent-up

energy” at the University in support of the program and found that the proposed curriculum is congruent with the goals of the overall program.

The reviewers recommended a greater emphasis on qualitative methods research and the inclusion of a course on the philosophy of the social sciences; greater faculty involvement on doctoral committees at other universities and the College recruiting a number of research-active mid-career faculty at the Associate Professor level to assist with the relative lack of current experience in teaching and supervising at the doctoral level; facilitating UML doctoral student attendance in appropriate courses provided by other local institutions as appropriate; and more fully developing the leadership specialization relative to faculty capability and objectives/outcomes/content.

UML concurred with the reviewers curricular recommendations and incorporated alterations to the core courses. The University responded that starting in Summer 2011, an internal program to encourage faculty to involve themselves in doctoral committees internally and at other universities will be initiated and that the University will review all future faculty recruitment plans to hire faculty with experience from a Ph.D. granting institution. UML will place a strong emphasis on hiring mid and senior level faculty in the next recruitment cycle. UML confirmed that doctoral students may take up to 6 credits in other local, Ph.D. programs. In regards to the leadership specialization, UML decided to launch the technology management, finance, and MIS specializations in the first year and then launching the remaining specializations, including leadership, after three years.

STAFF ANALYSIS AND RECOMMENDATION

Board staff thoroughly reviewed all documentation submitted by UML and external reviewers. Staff recommendation is for approval of the Doctor of Philosophy in Business Administration.

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.

ATTACHMENT A: CURRICULUM OUTLINE

Major Required (Core) Courses (Total courses required = 7)		
<i>Course Number</i>	<i>Course Title</i>	<i>Credit Hours</i>
66.730	Research Design Methods I*	3
66.733	Research Design Methods 2*	3
49.731	Statistics*	3
49.733	Econometrics I*	3
49.734	Econometrics II**	3
66.734	Qualitative Research Methods**	3
66.728	Organizational Theory***	3
49.730	Microeconomic Theory**	3
66.735	Managerial Research Seminar*	1
	SubTotal # Core Credits Required	19
Concentration Course Choices (Total courses required = 5) (attach list as needed)		

* = Denotes a core course to be taken by all specializations

** = Denotes a core course to be taken by students within finance specializations

*** = Denotes a core course to be taken by students within technology management, leadership, international business, and MIS specializations

Concentration Course Choices (Total courses required = 5) (attach list as needed)		
Finance Concentration (Finance Students Select Five of the Six Below Classes)		
61.740	Corporate Finance Theory	3
61.741	Investments Theory	3
61.742	Empirical Research in Finance	3
61.743	Seminar in Corporate Finance	3
61.744	Seminar in Investments	3
61.745	Econometrics III	3
	SubTotal # Concentration Credits Required	15
Technology Management Concentration		
66.750	Macro, Industry, & Competitive Dynamics	3
66.751	Public & Business Policy Practicum	3
64.740	Technology Commercialization	3
64.741	Corporate Entrepreneurship	3
64.742	Independent Study	3
	SubTotal # Concentration Credits Required	15

Leadership Concentration		
66.740	Leadership Theory & Principles	3
66.741	Leadership & Decision Making	3
66.742	Leadership & Change Management	3
66.743	Leadership & Ethics	3
66.744	Independent Study	3
	SubTotal # Concentration Credits Required	15

International Business Concentration		
66.760	International business research	3
62.740	International marketing research	3
61.746	International finance research	3
66.761	International management research	3
66.762	International business research methods	3
	SubTotal # Concentration Credits Required	15

MIS		
63.730	Advanced Data Management	3
63.735	Advanced Systems Development Methodology	3
63.740	Advanced Data Communications and Networking Technologies	3
63.745	Electronic Commerce	3
63.750	Seminar in Information Systems Research	3
	SubTotal # Concentration Credits Required	15

Other/Elective Course Choices (Total courses required = 4) (attach list as needed)		
61.780	Market Microstructure	3
61.781	Behavioral Finance	3
61.782	Financial Derivatives	3
61.783	International Financial Management	3
61.784	Special Topics in Finance	3
66.780	Qualitative Methods/Case Workshop	3

66.782	Business Policy and Strategy	3
63.755	Business Intelligence and Data Mining	3
63.760	Enterprise Information Systems	3
63.765	Global Supply Chain Management	3
63.770	Information Privacy and Security	3
63.780	Information Technology Project Management	3
63.785	Knowledge Management	3
63.795	Strategic Information Systems	3
66.784	Country/regional Studies Seminar	3
	SubTotal # Elective Credits Required	12

Curriculum Summary	
Total number of courses required for the degree	46 Credits
Dissertation	18 Credits
Total credit hours required for degree	64 Credits
Prerequisite or Other Additional Requirements:	

ATTACHMENT B: BUDGET

<i>One Time/ Start Up Costs</i>	<i>Cost Categories</i>	<i>Annual Expenses</i>			
		<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>
	Full Time Faculty (Salary & Fringe)	\$171,000	\$228,000	\$285,000	\$285,000
	Part Time/Adjunct Faculty (Salary & Fringe)	\$0	\$0	\$0	\$0
	Staff	\$0	\$0	\$0	\$0
\$25,000	General Administrative Costs	\$40,000	\$40,000	\$40,000	\$40,000
	Instructional Materials, Library Acquisitions	\$5,000	\$5,000	\$5,000	\$5,000
\$35,000	Facilities/Space/Equipment	\$0	\$10,000	\$10,000	\$10,000
	Field & Clinical Resources	\$0	\$0	\$0	\$0
\$30,000	Marketing	\$30,000	\$15,000	\$15,000	\$15,000
	Other (Specify):	\$0	\$0	\$0	\$0
	TOTALS	\$246,000	\$298,000	\$355,000	\$355,000

<i>One Time/Start-Up Support</i>	<i>Revenue Sources</i>	<i>Annual Income</i>			
		<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>
	Grants	\$50,000	\$50,000	\$50,000	\$50,000
	Tuition	\$9,822	\$19,644	\$39,288	\$58,932
	Fees	\$50,274	\$100,548	\$201,096	\$301,644
	Departmental:	\$0	\$0	\$0	\$0
	Reallocated Funds	\$225,000	\$300,000	\$375,000	\$375,000
	Other (specify)	\$0	\$0	\$0	\$0
	TOTALS	\$335,096	\$470,192	\$665,384	\$785,576

A. Budget Narrative: Costs

- Full-time Faculty: The Ph.D. in Business Administration will be taught on campus by full time tenure track faculty members who are fully qualified and interested. Most of the required faculty are already employed by the department. The cost of reassigning faculty from courses in their undergraduate teaching load is calculated at 20% of the Management Faculty median salary (\$107,172) plus 33.33% fringe, which equals \$28,508, or approximately \$28,500 per course. This cost will be offset by strategic management of undergraduate enrollment (higher selectivity, fewer students), which will

reduce the need for undergraduate sections taught by both permanent faculty and adjunct faculty. We project hiring three new faculty in years two and three; these costs are reflected in the .2 EFT per course.

- Part Time/Adjunct Faculty: No new Adjunct faculty will be required for this program.
- Staff/Administrative Costs: An additional staff assistant will be hired to assist with social media and program coordination. This is reflected in the administrative costs of \$25,000 for start-up and \$40,000 annually.
- Instructional materials and library acquisitions; These needs are anticipated to be \$5,000 per year. We have already invested in significant start-up costs in research data bases.
- Facilities for this program are already in place. A budget of \$35,000 is allocated for start up costs for minor adaptations in space and purchasing equipment. Annual, routine equipment replacement is projected as \$10,000 for years two, three, and four.
- Marketing costs for aggressive advertising and printing are estimated to be \$30,000 during start-up and the first year, with \$15,000 annually thereafter.
- Graduate Teaching Assistants do not teach at the doctoral level. Costs for Graduate Teaching Assistants are assigned to the undergraduate departments receiving instruction.

Budget Narrative: Revenue Sources

- Faculty are well qualified and expected to generate external funds through grants and corporate gifts of \$50,000 annually to help support the Ph.D. initiative.
- Revenue from tuition and fees is projected at current rates. The estimate is supported by the large number of inquiries expressing interest in this program.
- Reallocated funds are derived from strategic management of undergraduate enrollment, in which admissions standards will be increased and fewer undergraduates admitted. This will make possible the reassignment of faculty to doctoral courses and the hiring of fewer adjunct faculty.